



COUNTY COUNCIL OF LANARK.

ANNUAL REPORT

OF THE

COUNTY AND DISTRICT MEDICAL OFFICER

AND THE

DISTRICT SANITARY INSPECTORS

FOR THE YEAR 1924.

GLASGOW:

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STAFF.

COUNTY HEALTH DEPARTMENT.

County Medical Officer.

J. HUME PATTERSON, F.R.F.P.S. (G.), D.P.H.

Assistant Health Officers and Tuberculosis Officers.

Middle Ward District—

J. M'CALLUM LANG, M.D., D.P.H.

J. R. SUTHERLAND, M.B., Ch.B., D.P.H., B.Sc.

JOHN A. C. GUY, M.B., Ch.B., D.P.H.

Upper Ward District—

ALEX. FRASER, M.D., D.P.H.

Lower Ward District—

JOHN P. CRICHTON, L.R.C.P. & S., D.P.H., L.D.S.

Bacteriologist.

VACANT.

Chemist.

WALTER BROWN, F.C.S.

Senior Inspectors—Food and Drugs, Rivers Pollution, &c.

CHARLES MACARA.

FRANK M'ARTHUR.

COUNTY OF LANARK

(EXCLUSIVE OF BURGHS).

Report of the County Medical Officer.

Year 1924.

STAFF.

Owing to the adoption of the Local Government and Other Officers Superannuation Act, 1922, by the County Council, Dr. John T. Wilson demitted office during the year, and although this Report is issued by me as County Medical Officer, it should be pointed out that the bulk of the work reported on was carried out during his tenure of office. Since his appointment in 1894 there has been a revolution in sanitary administration not only in the County of Lanark but in the country generally, and the improvement in sanitation in the County is in a large measure due to the activities of Dr. Wilson. The County of Lanark has always been a pioneer in any new aspect of public health, and it is hoped that the high standard set by him will be continued. The fall in the number of cases of enteric fever is a striking example of the improvement in sanitation, and Dr. Wilson has prepared a survey, with regard to the incidence of this disease during his administration, which forms an Appendix to this Report.

It is with extreme regret that I have to record the death of Dr. J. Thomson Dick which took place in the County Hospital, Motherwell, on 19th October, 1924, due to Toxic Scarlet Fever of a malignant type. Dr. Dick contracted his illness during a visit to a child who suffered from the disease and thus his brilliant career was cut short in the prime of life.

I have also to record the retirement of Mr. John H. Lindsay under the Superannuation Scheme. Mr. Lindsay was appointed Chief Statistical Clerk in October, 1903, and during his tenure of office carried out his various duties conscientiously and tactfully.

STATISTICS.

The *Area* of each of the three Sanitary Districts of the County is as follows:—Middle Ward, 186,118 acres; Upper Ward, 326,803 acres; and Lower Ward, 24,643 acres.

The *Population*, as ascertained at the Decennial Censuses, 1891, 1901, 1911, and 1921, as well as the estimated population for the years 1922, 1923, and 1924, are given in the following tabular statement. The population, estimated to the middle of the year, is based upon the number of occupied houses, according to the Valuation Roll and the institution population in the annual Police Census:—

<i>(Census Population.)</i>					
Year.		Middle Ward.	Upper Ward.	Lower Ward.	County.
1891,	-	142,548	37,005	30,261	209,814
1901,	-	179,363	40,420	*41,531	261,314
1911,	-	202,663	42,978	56,974	302,615
1921,	-	218,817	46,701	29,933	295,451
<i>(Estimated Population.)</i>					
1922,	-	224,790	46,870	30,220	301,880
1923,	-	232,700	47,700	31,500	311,900
1924,	-	237,000	48,400	32,600	318,000

* Does not include the population (5,642) in the area annexed to the Burgh of Govan as from 15th August, 1901.

The reduction in the area and population through extension of Burgh Boundaries since the year 1891 was as follows:—

				Acreage.	Estimated Population.
1896—City of Glasgow,	-	-	-	450	632
Burgh of Wishaw,	-	-	-	465	1,100
1899—City of Glasgow,	-	-	-	370	399
1901—Burgh of Govan,	-	-	-	209	5,642
Do. Hamilton,	-	-	-	67	—
1906—Do. Rutherglen,	-	-	-	469	3,000
1908—Do. Motherwell,	-	-	-	438	3,600
Do. Lanark,	-	-	-	214	260
1912—City of Glasgow,	-	-	-	1,706	28,490
1913—Burgh of Renfrew,	-	-	-	216	18
1914—Do. Coatbridge,	-	-	-	32	4
1920—Do. Motherwell and Wishaw,	296				500

Rates.—For the purposes of comparison, Table A shows birth and mortality rates of each Sanitary District for the last three decennial periods, and for the years 1921-1924. It will be observed that the rates are highest in the Middle Ward District, where the employment of the population is chiefly in mining and manufacturing industries.

In each District there has been a marked decline in the birth-rate and death-rate since the decennial period of 1901-10, the birth-rates in the Lower and Middle Ward Districts being the lowest yet recorded.

The *natural increase of the population*—i.e., the excess of births over deaths—also shows a considerable decline, the figures for the three quinquennial periods, 1891-1920, and for the last four years being as follows:—

	Annual average.						
	1891-1900	1901-1910	1911-1920	1921	1922	1923	1924
Natural increase. ...	4,563	5,844	4,843	5,425	4,239	4,574	4,060
Natural increase per 1,000 of the Population, ...	19.3	20.5	16.7	18.3	14.0	14.6	12.7

TABLE A.—SHOWING BIRTHS AND DEATHS IN EACH COUNTY SANITARY DISTRICT; BIRTH-RATES AND DEATH-RATES PER 1,000 OF THE POPULATION; AND INFANTILE DEATHS AND INFANT MORTALITY RATES PER 1,000 BIRTHS.

	Average. 1891-1900.	Average. 1901-1910.	Average. 1911-1920.	1921.	1922.	1923.	1924.
MIDDLE WARD.—							
Births, ...	6,232	7,412	6,820	7,023	6,364	6,218	6,251
Birth-rates, ...	39.1	38.9	32.5	32.1	28.3	26.7	26.3
Infant Deaths (under one year), ...	809	921	754	632	650	481	620
Infant Deaths per 1,000 Births, ...	129.9	124.2	110.4	89.9	102.1	77.3	99.2
Deaths, ...	2,908	3,118	3,000	2,660	2,936	2,620	3,023
Death-rates, ...	18.1	16.3	14.3	12.1	13.0	11.2	12.7
UPPER WARD.—							
Births, ...	1,222	1,209	1,143	1,225	1,097	1,144	1,119
Birth-rates, ...	31.6	28.9	25.9	26.2	23.5	23.9	23.1
Infant Deaths (under one year), ...	116	104	91	76	101	74	86
Infant Deaths per 1,000 Births, ...	95.5	86.5	80.2	62.0	92.0	64.6	76.7
Deaths, ...	606	552	561	541	584	512	581
Death-rates, ...	15.6	13.2	12.7	11.5	12.4	10.7	12.0
LOWER WARD.—							
Births, ...	1,200	1,576	869*	672	643	664	625
Birth-rates, ...	32.9	33.4	24.1*	22.4	21.2	21.0	19.1
Infant Deaths (under one year), ...	150	174	88*	60	48	48	48
Infant Deaths per 1,000 Births, ...	125.2	110.8	98.2*	89.3	74.6	72.3	76.8
Deaths, ...	577	683	428*	294	345	320	331
Death-rates, ...	15.9	14.4	12.2*	9.8	11.4	10.1	10.1

* By the Glasgow Boundaries Act, 1912, an area of 1,706 acres, with a population of 28,490 was annexed by the City of Glasgow, which affected the statistics from 1st January, 1913.

In Table B the deaths during the year have been classified according to cause.

Respiratory diseases, classified as bronchitis and pneumonia, caused 612 deaths, or 15·5 per cent. of the total mortality. If to this be added deaths from influenza, which amounted to 164, or 4·2 per cent.; deaths from other respiratory diseases which amounted to 55, or 1·4 per cent.; and deaths from pulmonary tuberculosis, which amounted to 167, or 4·2 per cent., it will be found that diseases of the chest and respiratory organs are responsible for one-fourth of the total deaths. Compared with last year, there was a considerable increase in the number of deaths from bronchitis, pneumonia, and influenza, but the deaths from pulmonary tuberculosis show a slight decrease. The deaths from these respiratory diseases included 175 deaths of infants under one year.

Organic Heart Diseases were responsible for 314 deaths, or 8 per cent. of the total deaths.

Malignant Diseases—certified as cancer, carcinoma, sarcoma, &c.—were responsible for 282 deaths, of 7·1 per cent. of the total deaths. In the following table statistics are given for the whole period of County administration, which show that the rate of mortality has increased considerably. Eighty-eight per cent. of the deaths were of persons over 45 years of age.

MALIGNANT DISEASES—DEATHS AND DEATH-RATES PER 10,000 OF THE POPULATION IN QUINQUENNIAL PERIODS FROM 1891-1920 AND FOR THE YEARS 1921, 1922, 1923, AND 1924, FOR EACH OF THE THREE COUNTY SANITARY DISTRICTS.

	Middle Ward.		Upper Ward.		Lower Ward.	
	Average annual deaths.	Death-rate.	Average annual deaths.	Death-rate.	Average annual deaths.	Death-rate.
1891-95,	75	4·9	18	4·7	14	4·4
1896-1900,	87	5·1	25	6·2	21	5·2
1901-05,	97	5·2	31	7·7	21	4·7
1906-10,	136	6·9	31	7·2	38	7·4
1911-15,	137	6·6	40	9·2	31	8·1
1916-20,	160	7·5	41	9·3	28	9·4
1921,	183	8·3	35	7·5	25	8·3
1922,	178	7·9	32	6·8	35	11·5
1923,	209	8·9	54	11·3	28	8·8
1924,	201	8·4	43	8·8	38	11·6

The deaths from the various *infectious diseases* are dealt with under the heading, "Prevalence of Infectious Diseases."

The *infant deaths*, according to cause, are given under the heading "Maternity and Child Welfare."

TABLE B.—DEATHS IN EACH OF THE THREE COUNTY SANITARY DISTRICTS, CLASSIFIED ACCORDING TO CAUSE, GIVING THE DEATH-RATES PER 1,000 OF POPULATION FOR THE YEAR 1924.

Cause of Death.	MIDDLE WARD.		UPPER WARD.		LOWER WARD.	
	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.
Enteric Fever, - - - -	2	·00	—	—	—	—
Measles, - - - -	151	·63	13	·26	7	·21
Scarlet Fever, - - - -	18	·07	9	·18	1	·03
Whooping-Cough, - - - -	80	·33	10	·20	2	·06
Diphtheria, - - - -	28	·11	2	·04	1	·03
Influenza, - - - -	122	·51	27	·55	15	·46
Erysipelas, - - - -	6	·02	—	—	—	—
Other Septic Diseases, - - - -	31	·13	8	·16	2	·06
Cerebro-spinal Fever, - - - -	3	·01	—	—	—	—
Chickenpox, - - - -	1	·00	—	—	—	—
Enc. Lethargica, - - - -	18	·07	—	—	2	·06
Pulmonary Tuberculosis, - - - -	132	·55	20	·41	15	·46
Meningeal, - - - -	60	·25	7	·14	5	·15
Abdominal, - - - -	43	·18	4	·08	—	—
Other Forms, - - - -	17	·07	2	·04	2	·06
Malignant Diseases, - - - -	201	·84	43	·88	38	1·16
Rheumatic Fever, - - - -	13	·05	2	·04	—	—
Meningitis (simple), - - - -	32	·13	7	·14	4	·12
Cerebral Hæmorrhage, - - - -	181	·76	40	·82	31	·95
Convulsions, - - - -	27	·11	10	·20	1	·03
Other Nervous Diseases, - - - -	68	·28	15	·31	8	·24
Organic Heart Disease, - - - -	228	·96	49	1·01	37	1·13
Bronchitis, - - - -	163	·68	46	·95	15	·46
Pneumonia, - - - -	319	1·34	40	·82	29	·88
Laryngitis, - - - -	2	·00	1	·02	—	—
Other Respiratory Diseases, - - - -	31	·13	20	·41	1	·03
Diarrhœa, - - - -	67	·28	14	·29	4	·12
Appendicitis and Typhlitis, - - - -	19	·08	7	·14	—	—
All Liver Diseases (normal), - - - -	11	·04	—	—	—	—
Other Digestive Diseases, - - - -	73	·30	11	·22	9	·27
Nephritis and Bright's Disease, - - - -	55	·23	9	·18	5	·15
Puerperal Sepsis, - - - -	15	·06	3	·06	—	—
Dis. and Acc. of Pregnancy, - - - -	19	·08	5	·10	—	—
Congenital Malformations, - - - -	36	·15	5	·10	5	·15
Premature Birth, - - - -	139	·58	7	·14	4	·12
Atrophy, Debility, &c., - - - -	89	·37	19	·39	9	·27
Atelectasis, - - - -	11	·04	—	—	—	—
Injury at Birth, - - - -	7	·02	1	·02	—	—
Suffocation—Overlying, - - - -	3	·01	—	—	—	—
Syphilis, - - - -	2	·00	1	·02	—	—
Rickets, - - - -	—	—	1	·02	—	—
Violence, - - - -	121	·51	21	·43	12	·36
Suicide, - - - -	11	·04	5	·10	—	—
Other Defined Diseases, - - - -	316	1·33	97	2·00	64	1·96
Ill-Defined Diseases, - - - -	52	·21	—	—	3	·09
Total, - - - -	3,023	12·7	581	12·00	331	10·15

The following table gives a comparison of the County birth and mortality rates with those of the Burgh areas for the year 1924. For this information I am indebted to the Registrar-General, and it

should be noted that the figures for the three County Sanitary Districts are slightly different from the figures published by the Public Health Department, due to the fact that the Registrar-General's estimated population differs from that of the Public Health Department:—

YEAR 1924.				
	Population Census, 1921.	Birth-rate. Corrected for Transfers.	Death-rate. Corrected for Transfers.	Infantile Mortality Rate. Corrected for Transfers.
COUNTY OF LANARK—				
Middle Ward, -	218,817	26·6	12·8	99
Upper Ward, -	46,701	22·8	11·9	76
Lower Ward, -	29,933	19·1	10·0	78
BURGHES—				
Glasgow, - -	1,034,174	24·1	16·1	119
Motherwell and Wishaw, -	68,869	25·2	12·9	98
Coatbridge, -	43,909	27·3	17·2	114
Hamilton, -	39,420	26·0	14·1	104
Airdrie, - -	25,093	29·4	16·7	105
Rutherglen, -	24,744	20·1	13·2	91
Lanark, - -	6,268	22·6	15·1	65
Biggar, - -	1,489	10·8	18·9	—

PREVALENCE OF INFECTIOUS DISEASES.

The undernoted diseases are classified in relation to notification, and are divided into two groups. Group I includes diseases which are compulsorily notifiable (a) under the Notification Act; (b) by adoption under the Notification Act; and (c) by order of the Local Government Board; and Group II not compulsorily notifiable diseases.

GROUP I.

(A)	(B)	(C)
	<i>August, 1906.</i>	<i>1st August, 1912.</i>
Smallpox.	Cerebro-spinal Meningitis.	Pulmonary Tuberculosis.
Diphtheria.	<i>24th October, 1912.</i>	<i>1st July, 1914.</i>
Scarlet Fever.	Acute Poliomyelitis.	All forms of Tuberculosis.
Typhus Fever.	Tetanus.	<i>1st November, 1918.</i>
Typhoid Fever.	Anthrax.	Ophthalmia Neonatorum.
Puerperal Fever.	Glanders.	<i>1st August, 1919.</i>
Erysipelas.	Actinomycosis.	Malaria.
		Dysentery.
		Trench Fever.
		Acute Primary
		Pneumonia.
		Acute Influenzal-
		Pneumonia.
		<i>26th December, 1924.</i>
		Infective Jaundice.

GROUP II.

(A)	(B)	(C)
*Measles.	Chickenpox.	Ringworm.
German Measles.	Mumps.	Scabies.
*Whooping-Cough.		Encephalitis Lethargica.

* Primary cases of those diseases under five years of age have been made notifiable under the Maternity and Child Welfare Scheme in the Upper Ward District.

Table C gives the cases and deaths due to the various infectious diseases in each Sanitary District during the year :—

TABLE C.

	Middle Ward.		Upper Ward.		Lower Ward.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Diphtheria, - - -	348	28	68	2	35	1
Scarlet Fever, - - -	979	18	425	9	91	1
Typhoid „ - - -	40	2	1	—	2	—
Cerebro-spinal Fever, -	5	3	—	—	1	—
Erysipelas, - - -	192	6	26	—	16	—
Puerperal Fever, - - -	54	15	3	3	3	—
Infantile Paralysis, - -	9	—	—	—	—	—
Ophthalmia Neonatorum,	97	—	3	—	19	—
Malaria, - - - -	4	—	—	—	—	—
Dysentery, - - - -	1	—	—	—	—	—
Tetanus, - - - -	2	—	—	—	—	—
Primary Pneumonia, -	1,259	319	75	40	83	29
Influenzal „ -	114		7		22	
Pulmonary Tuberculosis, -	403	132	42	20	57	15
Non Pulmonary „ -	477	120	43	13	31	7
*Measles, - - - -	—	151	—	13	—	7
*Whooping-Cough, - -	—	80	—	10	—	2
*Chickenpox, - - - -	—	1	—	—	—	—

* Not being notifiable the number of cases cannot be ascertained.

Measles and Whooping-Cough are the most prevalent forms of acute infectious disease and cause most deaths. The number of deaths from these diseases for the year amounted to 263, or 6·6 per cent. of the total deaths, compared with 135 in the year 1923. The deaths from scarlet fever and diphtheria only amounted to 59, or 1·5 per cent. of the total deaths. Tuberculosis was responsible for 307 deaths, or 7·8 of the total deaths, as compared with 348 deaths in the previous year.

DIPHTHERIA.

A—Cases per 10,000 population.

B—Deaths per 10,000 population.

C—Deaths per 100 cases.

	Middle Ward.			Upper Ward.			Lower Ward.		
	A.	B.	C.	A.	B.	C.	A.	B.	C.
1891-95, -	13.9	4.9	35.1	20.0	3.69	17.8	7.5	2.47	32.6
1896-1900,	8.5	2.0	24.3	22.0	1.46	6.53	8.4	1.73	20.4
1901-05 -	8.0	1.8	22.3	16.0	1.6	10.3	11.0	1.5	13.5
1906-10 -	19.3	2.0	10.8	36.6	1.74	4.75	26.0	1.9	7.2
1911-15 -	16.3	1.5	9.9	21.8	1.83	8.40	23.0	1.9	8.6
1916-20 -	14.2	1.3	10.0	18.0	1.5	8.5	12.0	1.2	9.7
1921, -	14.3	1.5	10.5	19.0	0.9	4.4	20.0	1.3	6.4
1922, -	12.6	2.0	16.1	15.0	1.5	9.7	18.0	0.6	3.6
1923, -	12.8	1.0	8.0	9.0	0.8	8.7	11.0	0.9	8.3
1924, -	14.6	1.1	8.0	14.4	0.4	2.9	10.7	0.3	2.8

The fatality-rate in the Upper and Lower Ward Districts shows a considerable decline, while the Middle Ward still remains low.

The distribution of antitoxin from hospitals, health centres, and police stations is not being taken advantage of to any great extent, as over 300 cases admitted to hospital did not receive antitoxin before admission.

SCARLET FEVER.

A—Cases per 10,000 population.

B—Deaths per 10,000 population.

C—Deaths per 100 cases.

	Middle Ward.			Upper Ward.			Lower Ward.		
	A	B	C	A	B	C	A	B	C
1891 95, -	74.2	2.2	3.06	78.8	1.77	2.3	55.1	2.6	4.6
1896-1900,	61.3	2.4	3.98	82.7	2.28	2.7	58.5	2.4	4.0
1901-05, -	34.4	1.3	3.90	45.6	0.97	2.13	29.6	0.9	2.9
1906-10, -	46.7	1.1	2.54	55.2	0.70	1.27	42.1	1.2	2.7
1911-15, -	57.0	1.3	2.43	60.3	1.14	1.9	59.0	1.6	2.8
1916-20, -	43.6	0.9	2.61	35.0	0.5	1.5	21.0	0.2	1.2
1921, -	56.1	1.1	2.11	56.3	0.2	0.3	25.7	—	—
1922, -	56.1	1.1	2.06	85.9	2.3	2.7	23.8	0.3	1.4
1923, -	53.3	0.9	1.77	55.5	0.6	1.1	31.4	—	—
1924, -	41.3	0.7	1.83	87.8	1.8	2.1	27.9	0.3	1.0

In the Middle Ward District the number of cases shows a considerable decline, but in the Upper Ward District the incidence of the disease was higher than the previous year. The type of the disease was mild, as evidenced by the low fatality-rate, although this rate shows a slight increase in the Upper Ward District.

TYPHOID OR ENTERIC FEVER.

A.—Cases per 10,000 population.

B.—Deaths per 10,000 population.

C.—Deaths per 100 cases.

	Middle Ward.			Upper Ward.			Lower Ward.		
	A.	B.	C.	A.	B.	C.	A.	B.	C.
1891-95, -	30.9	4.2	11.95	12.2	1.5	12.4	14.0	2.2	15.5
1896-1900, -	20.7	2.6	12.73	6.9	1.2	17.6	11.3	1.5	13.0
1901-05, -	15.6	2.1	13.54	4.9	0.9	18.8	8.8	1.2	13.3
1906-10, -	10.4	0.9	9.40	2.9	0.5	17.4	7.6	0.6	8.4
1911-15, -	5.4	0.5	11.09	1.4	0.3	23.3	2.5	0.5	19.2
1916-20, -	4.0	0.5	12.74	0.7	0.02	5.9	1.7	0.06	3.8
1921, -	4.8	0.6	13.2	0.2	—	—	0.6	—	—
1922, -	2.0	0.1	8.7	—	—	—	0.3	—	—
1923, -	2.6	0.2	8.2	0.4	0.2	50.0	0.6	—	—
1924, -	1.6	0.08	5.0	0.2	—	—	0.6	—	—

The decline in cases and deaths from this disease has been very gratifying during the period of County administration. In an Appendix to this Report Dr. John T. Wilson deals with the incidence of the disease throughout the whole period.

MEASLES AND WHOOPING-COUGH.

DEATH-RATES PER 10,000 OF THE POPULATION.

	MEASLES.			WHOOPING-COUGH.		
	Middle Ward.	Upper Ward.	Lower Ward.	Middle Ward.	Upper Ward.	Lower Ward.
1891-95, -	9.3	3.4	5.2	6.2	5.6	2.8
1896-1900, -	6.5	2.2	6.2	5.2	2.9	5.3
1901-05, -	4.2	0.5	4.8	5.7	2.3	6.3
1906-10, -	5.7	2.1	4.5	4.8	2.7	5.4
1911-15, -	5.3	0.8	3.0	6.1	1.6	3.4
1916-20, -	4.4	1.3	2.0	3.9	1.8	2.6
1921, -	0.4	—	0.6	6.0	3.6	1.0
1922, -	6.3	1.7	3.6	3.7	2.1	0.9
1923, -	1.9	0.8	0.6	2.8	2.5	1.5
1924, -	6.3	2.6	2.1	3.3	2.0	0.6

There was a considerable increase in the prevalence of these two diseases, although the exact incidence is not known as the diseases

are not compulsory notifiable. Towards the close of the year, under the Maternity and Child Welfare Scheme, in the Upper Ward District primary cases in children under five years were made notifiable. 25·4 per cent. of the deaths from measles and whooping-cough were of infants under one year of age, and 94·2 per cent. were of children under five years of age.

Owing to the demands on hospital accommodation for other acute infections, very few cases were removed to hospital, 38 cases of measles and 6 cases of whooping-cough being removed to the County Hospital, Motherwell, while 13 cases of measles were removed to Lightburn Joint Hospital, Shettleston.

PULMONARY TUBERCULOSIS.

Morbidity. A—Cases per 10,000 population.

Mortality. B—Deaths per 10,000 population.

Fatality. C—Deaths per 100 cases.

	Middle Ward.			Upper Ward.			Lower Ward.		
	A.	B.	C.	A.	B.	C.	A.	B.	C.
1891-95 -	—	13·5	—	—	12·0	—	—	12·8	—
1896-1900,	—	11·4	—	—	11·9	—	—	11·7	—
1901-05, -	—	10·0	—	—	10·5	—	—	12·4	—
1906-10, -	14·6	8·8	60·3	8·4	8·1	97·2	12·2	11·3	87·7
1911-15, -	16·2	8·1	50·3	11·4	7·0	64·0	14·5	6·8	47·4
1916-20, -	16·4	7·5	46·1	9·6	6·3	65·1	14·0	7·3	52·4
1921, -	17·3	6·3	36·9	7·0	4·3	60·6	15·3	4·0	26·1
1922, -	16·3	5·8	35·6	10·2	4·5	43·7	13·9	7·3	52·4
1923, -	18·1	6·3	34·8	10·7	6·9	64·7	14·3	8·2	57·8
1924, -	17·5	5·5	31·8	8·6	4·1	47·6	17·4	4·6	26·3

NON-PULMONARY TUBERCULOSIS.

Morbidity. A—Cases per 10,000 population.

Mortality. B—Deaths per 10,000 population.

Fatality. C—Deaths per 100 cases.

	Middle Ward.			Upper Ward.			Lower Ward.		
	A.	B.	C.	A.	B.	C.	A.	B.	C.
1891-95, -	—	9·7	—	—	6·2	—	—	7·1	—
1896 1900,	—	8·9	—	—	4·4	—	—	6·8	—
1901-05,	—	8·2	—	—	4·9	—	—	7·2	—
1906-10,	—	8·9	—	—	4·4	—	—	7·6	—
1911-15,	—	6·9	—	—	2·8	—	—	5·8	—
1916-20,	16·3	5·3	32·4	5·6	3·3	60·0	10·3	3·5	35·5
1921,	21·9	4·7	21·6	6·8	3·2	46·8	10·0	2·7	26·6
1922,	22·2	4·8	22·0	6·8	3·6	53·1	11·2	3·6	32·3
1923,	20·4	5·2	25·9	6·2	2·3	36·6	13·0	2·5	19·5
1924,	20·2	5·0	25·0	8·6	2·6	30·9	9·5	2·1	22·5

The provision of institutional treatment for tuberculosis was commenced in 1905, and notification by medical practitioners was at first arranged for on a voluntary basis, and later by adoption under the Notification Act. In the year 1912 pulmonary tuberculosis was made compulsorily notifiable throughout Scotland by an Order of the Local Government Board, and on 1st July, 1914, non-pulmonary forms of the disease were dealt with in a similar manner.

The cases of pulmonary tuberculosis during the year numbered 514, compared with 519 in the year 1923, whereas non-pulmonary cases amounted to 553, compared with 546.

It is gratifying to note that there is a considerable decline in the number of deaths which took place of non-notified cases, although a few still occur, and quite a large number are only notified when death is approaching.

The preceding tables show that in all three areas there has been a decline in the death-rate from pulmonary tuberculosis when compared with the previous year, and that since the commencement of County administration there has been a marked fall in the number of deaths from all forms of the disease.

INSTITUTIONAL ACCOMMODATION.

Acute Infectious Diseases.—The County Hospital, Motherwell, provides not only for the Middle Ward District, but admits cases from the Upper and Lower Ward Districts when accommodation is available.

In the Upper Ward District, cases are accommodated in Lanark Burgh Hospital, but the question of a new isolation hospital is under consideration. This matter has been delayed owing to the proposed formation of a Joint Sanatorium Board for the County and Burgh authorities.

The Lower Ward District cases are accommodated at Lightburn Joint Hospital, Shettleston, and a small proportion of the Middle Ward cases are also treated there.

Smallpox.—Although no hospital has been definitely provided for smallpox within the County, there are small institutions in the Middle Ward District that could deal with a few cases. If an outbreak developed to any extent it would be possible to utilise one of the more outlying institutions in the Middle Ward District.

Tuberculosis.—By agreement between the three District Committees, all the accommodation in the County for the treatment of tuberculosis is available to each of the Districts, although the most complete accommodation is provided by the Middle Ward District Committee. At Hairmyres Colony many patients are admitted from areas outside the County Districts, and even outside the County of Lanark altogether.

Maternity and Child Welfare Scheme.—The Maternity Hospital at Bellshill still continues to be used for simple and complicated cases of labour, with beds for ante-natal and post-natal cases. The Convalescent Home at Calderbank House is utilised for mothers and children, and the small institution at Blantyre is chiefly used as a Babies' Home. These institutions are all in the Middle Ward District, but cases are also admitted from the Upper Ward and the Lower Ward Districts.

All the institutional accommodation in the County is provided by each of the three District Committees, and details of the work carried out at the various institutions are given in the District Reports. The following tabular statement shows the institutions throughout the County and the nature of the work carried out:—

INSTITUTION.	Nature of Work.
<i>Middle Ward District—</i>	
County Hospital, Motherwell,	All forms of acute infectious disease; surgical tuberculosis; indoor and outdoor treatment of venereal diseases; X-rays, with radiographic equipment. Recognised as a training school for nurses by the General Nursing Council.
Hairmyres Colony, by East Kilbride.	Treatment and training of adult cases of tuberculosis; treatment and education of children; especially those in early stages of the disease and those in whom the disease is quiescent.
County Sanatorium, Stonehouse,	Non-pulmonary forms of tuberculosis, including orthopædic treatment—both sexes. X-ray, with radiographic equipment.
County Sanatorium, Shotts,	Pulmonary tuberculosis—both sexes. Outdoor V.D. clinic for males and females.
County Sanatorium, Uppertown, Longriggend.	Pulmonary tuberculosis—both sexes.

INSTITUTION.

Nature of Work.

Middle Ward—Contd.

County Hospital, Bellshill,

Maternity Hospital for simple and complicated cases of labour. Has special wards for ante-natal and post-natal cases. Recognised by the Central Midwives Board as a training school for midwives.

County Convalescent Home,
Calderbank House, Baillieston.

For mothers and children under 5 years requiring convalescent treatment.

County Hospital, Blantyre,

For mothers and babies.

** Upper Ward District—*

District Sanatorium,
Roadmeetings, Carluke.

Pulmonary tuberculosis—both sexes.

Lower Ward District—

†Lightburn Joint Hospital,
Shettleston.

All forms of acute infectious disease; one pavilion is set aside entirely for the treatment of Lower Ward tuberculosis patients; out-door clinic for V.D. Recognised as a training school for nurses by the General Nursing Council.

VENEREAL DISEASES.

Full details of the scheme operating in the County of Lanark, including the Burghs of Airdrie, Coatbridge, Hamilton, Motherwell and Wishaw, Rutherglen, Lanark, Biggar, and Kirkintilloch were given in the Annual Report for 1921. In the County area there are three clinics, viz.:—one at the County Hospital, Motherwell; one at Lightburn Joint Hospital, Shettleston; and one at the County Sanatorium, Shotts. In addition to the three clinics in the County area there are also three clinics situated in the Burgh areas, viz.:—Coatbridge, Wishaw, and Hamilton.

* Upper Ward acute infectious diseases are admitted to the Lanark Burgh Hospital by arrangement with the Lanark Town Council when accommodation is available pending the provision of a new district isolation hospital.

† This institution is owned jointly by the Lower and Middle Ward District Committees and by the Corporation of Glasgow in the following proportions:—Lower Ward, $\frac{5}{8}$ ths; Middle Ward, $\frac{2}{8}$ ths; and Glasgow, $\frac{1}{8}$ th.

The following tabular statement shows the number of new cases belonging to the County area dealt with at these centres:—

	Middle Ward.		Upper Ward.		Lower Ward.	
	M.	F.	M.	F.	M.	F.
Syphilis,	32	29	5	2	3	2
Gonorrhœa,	45	17	4	2	—	2
Mixed Infection,	1	1	—	—	—	—
Others,	35	7	2	2	2	—
	113	54	11	6	5	4

These cases were treated at the following centres:—Motherwell, 125; Hamilton, 13; Lightburn, 7; Wishaw, 14; Shotts, 20; and Coat-hill, 14.

REFRACTORIES INDUSTRIES (SILICOSIS) SCHEME.

In the Middle Ward District seven examinations were carried out at the Birkenshaw Brick Works, Larkhall, three of these being first examinations and four secondary.

In the Upper Ward District fourteen examinations were carried out at the brick works belonging to the Clydesdale Brick and Quarry Company, Auchenheath. Of these eight were first examinations and six were secondary.

In the Lower Ward District fifteen examinations were carried out at the Heathfield and Cardowan Fire Clay Works. These were all secondary examinations.

No evidence of any disease was found.

Maternity Service and Child Welfare.

The schemes drawn up under the Notification of Births (Extension) Act, 1915, are all administered by the respective District Committees, and the details of the work carried out under these schemes are given in the District Reports. Two Medical Officers are employed by the Middle Ward District Committee to devote the whole of their time to this work, and the Assistant Health Officers also act as Medical Officers at various centres. In addition to the staff of Nurse Health Visitors employed by the District Committees, the services of District Nurses are obtained in certain rural areas as part-time Health Visitors.

Details of the work carried out at Bellshill Maternity Hospital, Calderbank Convalescent Home, and the small Institution at Blantyre are given in the Report for the Middle Ward District.

HOUSING.

The number of *Occupied* and *Unoccupied Houses* as given in the Valuation Roll, for each year since 1919, was as follows:—

Year	1919	1920	1921	1922	1923	1924
UPPER WARD—						
Occupied, -	9,652	9,719	9,754	9,858	10,109	10,225
Unoccupied,	178	136	112	102	110	117
MIDDLE WARD—						
Occupied, -	41,227	41,309	41,565	42,507	44,020	44,836
Unoccupied,	349	285	157	706	554	356
LOWER WARD—						
Occupied, -	5,760	5,757	5,779	5,842	6,092	6,322
Unoccupied,	39	32	14	18	53	16
COUNTY—						
Occupied, -	56,639	56,785	57,098	58,207	60,221	61,383
Unoccupied,	566	453	283	826	717	489
TOTAL HOUSES,	57,205	57,238	57,381	59,033	60,938	61,872

The figures referring to unoccupied houses include a number which were in course of erection but which would not be occupied for some time. The remainder were mansion houses and houses about farm steadings.

The number of persons per house in the County has increased since 1911, the figures for the years 1911, 1919, and 1924 being as follows:—5·08, 5·11, and 5·18 respectively. This increase in the number of persons per house is slight, but as there is a considerable decline in the birth-rate there should be a reduction in the number of persons per house instead of an increase if the housing requirements of the community were properly met. In addition there were 2,805 unoccupied houses in the year 1911, compared with 489 in the year 1924. This means that during the period since 1911 a large number have been occupied which were then empty.

The most urgent housing requirements are undoubtedly the replacement of insanitary houses, but there are also a considerable number of houses required to meet the normal demand.

State-Aided Schemes.—About 4,500 houses have been provided under the State-aided schemes. Details regarding parishes in which these houses were erected are given in the District Reports.

Improvement of Insanitary Areas.—Negotiations were still proceeding at the close of the year for the acquisition of sites for the erection of houses in connection with the improvement of insanitary areas, but very little progress was made.

In the Lower Ward District permission has been obtained from the Board of Health to erect 600 houses of two-apartments and 400 of three-apartments.

A considerable amount of progress has been made in the introduction of modern domestic and sanitary conveniences to existing dwellings. This matter is referred to in detail in the Reports of the District Sanitary Inspectors.

Milk and Dairies (Amendment) Act, 1922.

GRADED MILK.

In the County area there are thirteen producers who have licences under the above Order, viz:—3 Certified Milk, 8 Grade “A” (Tuberculin Tested) Milk, and 2 Grade “A” Milk.

The following tabular statement gives all the licence-holders for the various grades produced in the County, together with the number of cows in the herd and where marketed.

UPPER WARD DISTRICT.

Certified.

Name and Address.	No. of Cows.	How Marketed.
Andrew Murdoch, Teaths, Lesmahagow.	29	Retailed in Carluke and Crossford.

Grade A (Tuberculin Tested).

Gavin Hamilton, Auldtoun, Lesmahagow.	20	Sold wholesale to Dairy Company in Glasgow.
Jas. A. Brown, Cormiston Towers, Biggar.	45	Burgh of Motherwell and Wishaw Hospital and wholesale to a Dairy Company in Glasgow.
T. B. M'Gregor, Lesserlinn, Lanark.	34	Retailed in Lanark.
James Hodge, Brownhill, Carnwath.	20	Wholesale to a Dairy Company in Glasgow.
John Russell, Walston Mansions, Dunsyre.	31	Sold wholesale to a Dairy Company in Edinburgh.
John Kirkwood, Scorrieholm, Lesmahagow.	25	Sold wholesale to Dairy Company in Glasgow.

Grade A.

A. Affleck, Barnhill, Ponfeigh.	22	Sold as ordinary milk to a dairy-man in New Stevenston.
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MIDDLE WARD DISTRICT.

Certified.

Name and Address.	No. of Cows.	How Marketed.
Lord Hamilton, Dalzell Home Farm, Motherwell.	28	Retailed in Hamilton and Motherwell.
Hairmyres Colony, East Kilbride (owned by the Middle Ward District Committee).	58	Used by Institution.

Grade A (Tuberculin Tested).

James Murray, Stramolloch, Chapelton.	24	Stonehouse Hospital, and remainder sold retail in Strathaven district.
Eben More & Co., Dalma-coulter, Airdrie.	32	County Sanatorium, Uppertown, and retailed in Airdrie and Coat-bridge.

Grade A.

Andrew Wood, Nerston, East Kilbride.	39	Sold as ordinary milk to a dairy in Glasgow.
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The clinical examination and tuberculin tests have been carried out periodically by the County and District Veterinary Surgeon.

Samples of milk have been taken by the Food and Drugs Inspector, and these were examined in the Bacteriological and Chemical Laboratories. Except in a few instances the samples have always been found to comply with the conditions laid down.

All the Middle Ward Institutions, with the exception of the County Sanatorium, Shotts, are supplied with Grade "A" (Tuberculin Tested) Milk.

Veterinary Inspection of Dairy Herds.

The inspection of dairy herds throughout the County was carried out as formerly by the Veterinary Inspector and his Assistant. The following tabular statement shows the work carried out in each District during the year :—

	Herds Inspected.	Cows Examined.	Milk Samples Taken.	Cows found to be Suffering from Tubercle of the Udder.
Middle Ward, -	596	12,613	57	19
Upper Ward, -	205	4,617	10	4
Lower Ward, -	55	1,296	3	2

The procedure generally followed by the Veterinary Surgeon is to make an inspection of all dairy herds in the County at least once a year. The greater part of this is done during the winter months, when the dairy stock is housed indoors, although a few inspections are made during the grazing season.

Owing to restrictions due to foot-and-mouth disease, the inspections made during the year were greatly curtailed.

Bacteriological Laboratory.

J. HUME PATTERSON, F.R.F.P.S.(Glasg.), D.P.H.

The following table shows the total number of specimens dealt with since the opening of the Laboratory in 1903, and the sources of supply :—

RECORD OF WORK DONE SINCE 1903.

Year.	Specimens.	Sources of Supply.					
		Med. Pract.	P.H. Staff.	Hosp. Staff.	Sch. Med. Staff.	Vet. Surgeons.	Slaugh. Staff.
1903	569	...	...	...	...	...	...
1904	791	...	...	...	...	...	...
1905	1,270	...	...	...	...	...	...
1906	2,061	1,651	142	209	...	59	...
1907	5,678	2,739	1,794	1,094	...	40	11
1908	8,311	4,310	1,813	1,911	...	249	28
1909	7,774	3,202	1,148	3,041	...	336	47
1910	6,945	2,951	406	3,200	29	322	37
1911	5,949	2,890	494	2,250	99	191	25
1912	6,715	3,542	753	2,193	91	117	19
1913	6,199	3,006	627	2,190	120	244	12
1914	7,193	2,481	1,314	2,985	96	295	22
1915	6,497	2,370	1,212	2,848	2	52	13
1916	3,730	2,161	535	952	...	79	3
1917	4,725	1,990	480	2,136	...	117	2
1918	6,283	1,941	745	3,514	...	81	2
1919	8,595	2,741	1,219	4,446	23	166	...
1920	9,162	3,075	1,205	4,483	90	302	7
1921	10,409	3,118	1,794	5,139	67	285	6
1922	9,702	3,108	2,475	3,803	41	243	31
1923	10,485	3,294	2,062	4,785	84	241	19
1924	11,030	3,537	2,280	4,936	70	189	18

Tables A 1 and A 2 show the specimens received from the Upper, Middle, and Lower Ward Districts of the County, classified according to the nature of specimens:—

TABLE A1.

	TUBERCULOSIS.						TYPHOID.				DIPHTHERIA.				CEREBRO-SPINAL MENINGITIS.		MISCELLY- ANEOUS.					
	Sputum.		Urine.		Others.		Blood.		Urine.		Feces.		Throat.		Nose.			Fluids.		Swabs.		
	+	o	+	o	+	o	+	o	+	o	+	o	+	o	+	o		+	o	+	o	
Upper Ward,	73	126	—	6	4	9	1	4	—	—	—	—	42	223	—	1	—	1	—	18	21	21
Middle "	636	1,649	4	24	18	68	91	278	—	7	7	70	217	2,703	3	29	—	3	—	—	309	478
Lower "	15	60	—	1	—	17	1	8	—	—	—	—	25	221	—	—	—	1	—	—	4	9
TOTAL,	724	1,835	4	31	22	94	93	290	—	7	7	70	284	3,147	3	30	—	5	—	18	334	508

TABLE A2.

	VENEREAL DISEASE.						SPECIMENS FROM ANIMALS.									
	Syphilis.		Gonorrhoea.		Ophth. Neon.		Tuberculosis.		Anthrax.	Scabies.	Miscellaneous.					
	Smear.	Blood.	Smear.	Smear.	Smear.	Milk.										
	+	o	+	o	+	o	+	o	+	o	+	o				
Upper Ward,	—	—	4	12	1	7	—	1	4	19	8	2	3	10	1	119
Middle "	—	2	153	686	10	40	5	132	19	39	9	1	8	10	17	74
Lower "	—	—	16	48	—	6	—	15	2	1	6	—	1	2	—	3
TOTAL,	—	2	173	746	11	53	5	148	25	59	23	3	12	22	18	196

The specimens received from the various Burghs in the County and other Authorities are here classified according to the nature of the specimens received :—

	+	o
Typhoid, - - - - -	12	59
Diphtheria, - - - - -	83	545
Tubercle—Phthisis, - - - - -	139	438
„ other than Phthisis, - - - - -	5	21
Miscellaneous, - - - - -	100	68
Syphilis—Smear, - - - - -	—	—
„ Blood, - - - - -	173	310
Gonorrhœa—Smear, - - - - -	9	64
Ophthalmia neonatorum—Smear, - - - - -	—	2

The Burgh specimens were received from the following :—Hamilton, 520; Motherwell and Wishaw, 218; Airdrie, 228; Coatbridge, 478; Rutherglen, 151; Kirkintilloch, 75; Lanark, 100; Biggar, 16; and other Authorities, 242.

Diphtheria.—4,092 specimens were examined from the following sources :—

	+	o
County Practitioners (Throat), - - -	107	681
„ „ (Nose), - - -	1	3
Burgh „ (Throat), - - -	82	545
„ „ (Nose), - - -	1	—
Hospital Physicians (Throat), - - -	155	1,433
„ (Nose), - - -	—	15
Public Health Staff (Throat), - - -	22	1,033
„ (Nose), - - -	2	12
	<hr/>	<hr/>
	370	3,722
	<hr/>	<hr/>

Of the 1,420 primary swabs examined in direct smear preparation, 63 gave positive results.

Upper Ward.	Middle Ward.	Lower Ward.	Burghs.
13	36	2	12

Vincent's Angina.—Nine specimens were examined, with positive results in six of these.

Typhoid Fever.—538 specimens were examined, and the sources from which they were received may be enumerated thus:—

Agglutination Test.

		+	o
County Practitioners,	- - - -	20	107
Burgh „	- - - -	12	55
Hospital Physicians,	- - - -	37	47
Public Health Staff,	- - - -	6	80
Hospital Staff (Vaccine Inoculations),	-	25	14
		<u>100</u>	<u>303</u>

Blood Cultures.

Burgh Practitioner,	- - - -	—	1
Hospital Physicians,	- - - -	5	40
Public Health Staff,	- - - -	—	2
		<u>5</u>	<u>43</u>

Fæces.

County Practitioners,	- - - -	—	1
Burgh „	- - - -	—	3
Hospital Physicians,	- - - -	6	65
Public Health Staff,	- - - -	1	4
		<u>7</u>	<u>73</u>

Urines.

County Practitioners,	- - - -	—	1
Burgh „	- - - -	—	—
Hospital Physicians,	- - - -	—	1
Public Health Staff,	- - - -	—	5
		<u>—</u>	<u>7</u>

Tuberculosis.—3,313 specimens were examined from suspected cases of pulmonary tuberculosis, with the following results:—

		Sputa.		Others.	
		+	o	+	o
County Practitioners,	- -	86	502	4	23
Burgh „	- -	139	438	5	21
Hospital Physicians,	- -	583	1,100	22	95
Public Health Staff,	- -	55	233	—	7
		<u>863</u>	<u>2,273</u>	<u>31</u>	<u>146</u>

84 samples of milk were received from County Veterinary Surgeons, of which 25 were found positive.

Venereal Diseases.—Syphilis—1,404 specimens were examined from suspected cases of venereal disease, and gave the following results:—

	Wassermann Test.					
	Blood.		Cerebro-Spinal Fluid.		Spirochætes.	
	+	o	+	o	+	o
County Practitioners,	36	147	6	6	—	2
Burgh „	18	80	—	—	—	—
Hospital Physicians,	275	792	7	22	—	—
Public Health Staff,	4	9	—	—	—	—
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	333	1,028	13	28	—	2
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

Gonorrhœa.—137 specimens were examined, with the following results:—

					Smears.	
					+	o
County Practitioners,	-	-	-	-	11	37
Burgh „	-	-	-	-	9	26
Hospital Physicians, -	-	-	-	-	—	51
Public Health Staff, -	-	-	-	-	—	3
					<hr/>	<hr/>
					20	117
					<hr/>	<hr/>

It is impossible to state how many of these specimens are from primary cases, as the information supplied to the laboratory is very meagre, the cases being treated in a strictly confidential manner.

Ophthalmia Neonatorum.—155 specimens were examined for the presence of gonococci, and 5 of these gave positive results. Of the 150 specimens giving negative results, 6 shows Koch Weeks' bacillus, 13 Frankel's pneumococcus, 14 staphylococcus, 56 bacillus xerosis, and 2 streptococci.

Miscellaneous Specimens include specimens of pus and urine for pathogenic bacteria, fæces for dysentery, blood films for pernicious anæmia and malaria, hairs for ringworm, and potable waters.

Urine for Albumen.—298 specimens gave 98 positive results. In connection with the rules issued by the Central Midwives Board, it is provided that specimens of urine should be examined for albumen

before confinement. As many of the midwives are not competent to do this testing of urine satisfactorily, arrangements were made to have this work done at the laboratory.

Vaccines.—92 were prepared, 73 for medical practitioners, 17 for hospital physicians, and two for Public Health staff. These were for the treatment of cases of inflammation of the bladder, boils, abscesses, nasal catarrh, asthma, bronchitis, and rheumatoid arthritis. The beneficial results obtained with these autogenous (patient's own germ) vaccines have greatly increased the demand for them, and their preparation entails a large amount of time and care.

Bacterial Content of Milk.—68 samples were received for examination, the results of which were as follows:—

	Certified Milk.	Grade "A" (TT) Milk.	Grade "A" Milk.	Pasteurised Milk.	Ordinary Milk.
Under 5,000 bacteria per c.c.	12	16	1	1	—
„ 10,000 „ „	3	5	—	—	1
„ 20,000 „ „	2	8	—	2	—
„ 30,000 „ „	2	2	—	1	—
„ 50,000 „ „	1	2	—	—	—
„ 100,000 „ „	1	—	2	—	1
„ 200,000 „ „	—	2	—	—	—
Over 200,000 „ „	1	—	1	1	—
Coliform Bacillus present,	5	4	2	3	2

Brom-Cresol Purple Test.—To test the value of the above reaction, a series of milk samples was examined, comprising 101 normal and 18 abnormal, at the request of the County Veterinary Surgeon. The method employed was to take 10 c.c. of milk in a clean test tube, add 1 drop of saturated watery solution of Brom-Cresol Purple, noting the change of colour produced. Colour standards for comparison were prepared by adding quantities of N/10 Soda, increasing from group to group by 2 c.c., 10 c.c., of fresh milk being used in each case.

Group	1	2	3	4	5	6	7	8
N/10 soda added	0	2	4	6	8	10	12	14

It was found, however, that in adopting this colour standard, the lack of distinction between groups 1 to 6 made it necessary to regard them as one (the first) group, nor was there more than a very slight difference between Nos. 6, 7, and 8, which are, therefore, classified together as the last group. Variation also crept in with each fresh

milk put on for colour standard, according to its acidity. The results obtained were as follows :—

	Pathogenic Bacteria.						Group.
<i>Normal Sweet Milk—</i>							
90 samples from 46 herds,	-	-	Nil,	-	-		First.
8 „ „ individual cows,	-	-	Nil,	-	-		First.
<i>Normal Skimmed Milk—</i>							
3 samples from individual cows,	-	-	Nil,	-	-		First.
<i>Abnormal Milk from individual cows—</i>							
1 sample,	-	-	-	-	Nil,	-	First.
3 samples,	-	-	-	-	Nil,	-	Last.
1 sample,	-	-	-	-	A few tubercle bacilli,	-	First.
1 „	-	-	-	-	Many „ „	-	First.
1 „	-	-	-	-	„ „ „	-	Last.
1 „	-	-	-	-	A few streptococci,	-	First.
1 „	-	-	-	-	„ „	-	Last.
2 samples,	-	-	-	-	Many „	-	Last.
1 sample,	-	-	-	-	Numerous „	-	Last.
1 „	-	-	-	-	„ „	-	*
1 „	-	-	-	-	Few staphylococci,	-	Last.
2 samples,	-	-	-	-	Many „	-	First.
1 sample,	-	-	-	-	„ „	-	Last.
1 „	-	-	-	-	Numerous „	-	First.

It will be seen from the above that the results are far from consistent, and that the test is less helpful than naked eye examination in the detection of abnormal milk.

In order to test the value of the reaction in a mixed milk containing part of a bad milk, the following experiments were carried out :—

(a) A mixture of 1 part of an abnormal milk in the last group, in which no bacteria were found, with 5 parts of normal milk gave the reaction of normal milk.

(b) 5 samples of streptococcal milk belonging to the last group were each mixed with normal milk in the proportion of 1 in 5, and the mixtures all gave the reaction of normal milk.

The test is therefore incapable of detecting the abnormal milk of one cow when it is mixed with that of four healthy cows.

Rat Virus.—673 bottles were supplied, free of charge, on application, to farmers, householders, shopkeepers, and also to public works, &c.

* Reaction a dirty greyish colour. Could not be classified.

Chemical Laboratory.

WALTER BROWN, F.C.S.

The number of samples analysed or examined during the year amounted to 1,235, an increase of 762 over last year.

The following table shows for each year since 1902 the number of samples analysed :—

SAMPLES EXAMINED IN THE CHEMICAL LABORATORY CLASSIFIED ACCORDING TO ADMINISTRATIVE AUTHORITY UNDER WHICH THEY WERE OBTAINED.

Year.	Rivers Pollution.			Public Health Department.			Food and Drugs.	Total.
	Sewage Works.	Trade Effluents.	Streams.	Water Supplies.		Special.		
				Public.	Private.			
1902	49	87	180	18	16	...	...	350
1903	77	101	78	35	35	...	4	330
1904	55	54	85	40	38	8	34	314
1905	130	53	105	16	35	1	55	395
1906	69	7	20	1	32	10	37	176
1907	275	47	38	116	44	240	1	761
1908	61	52	77	101	41	418	6	756
1909	420	41	65	117	39	387	30	1,099
1910	77	49	83	187	55	375	115	941
1911	84	76	60	84	47	365	77	793
1912	30	30	69	100	35	379	1,635	2,278
1913	26	47	93	63	29	430	1,424	2,112
1914	69	47	103	67	35	165	489	975
1915	31	51	63	19	19	55	74	312
1916-18	...	...	...	...	...	...	...	...
1919	27	42	61	7	15	13	77	242
1920	26	123	142	7	19	28	217	562
1921	20	54	62	8	12	97	201	454
1922	50	38	66	...	32	60	318	564
1923	52	48	84	1	16	117	155	473
1924	12	101	489	4	26	100	503	1,235

Samples of Sewage.

SEWAGE WORKS.—Total, 12 samples, from the following purification works: — Bellshill, 1 sample; Westthorn, 3 samples; Annathill, 1 sample; Downiebrae Road Sewer, 1 sample of silt; Burgh of Lanark, 4 samples; and Burgh of Hamilton and Burgh of Motherwell, 1 sample each. The samples from Westthorn were received from the Lower Ward Engineer, and consisted of a 24-hourly sample of crude sewage, one sample taken at 3 a.m., as representing the weakest sewage, and one sample taken at 10 a.m., representing the strongest sewage. These samples were analysed in connection with the proposed treatment of the sewage by the activated-sludge method. The samples from Lanark were examined particularly for spent liquor, which was found absent. The samples, however, contained a large amount of free lime, derived from the tanning industry. The other samples were of the various effluents, and were submitted to the Royal Commission tests.

Samples of Trade Effluents.

Coal Washers.—60 samples from the following collieries:—

Stepends, 12 samples; Baton, 4 samples; Jerviston, 6 samples; Calderrigg, 3 samples; Gartness, 9 samples; Blantyre Ferme, 3 samples; Newton, 5 samples; Brownieside, 2 samples; Allanton, 5 samples; Wilsontown, 2 samples; and Stane, Broomside, Tannochside, Viewpark, Dewshill, Nackerty, Rosehall, and Darngavil Collieries, 1 sample each.

These effluents were all of a polluting nature, containing suspended solids varying from 35·0 up to over 12,000 parts per 100,000.

Pit Waters.—10 samples from the following collieries:—Woolfords, 1 sample; Hassockrigs, 4 samples; Douglas West, 2 samples; Muirhead, 2 samples; and Pool, 1 sample. The pit water at Woolfords and the mine drainage from Pool may now be considered normal; there was no free acid found, and the total iron is reduced to 18·0 and 2·9 parts per 100,000 respectively. Hassockrigs pit water contained suspended solids, varying from 23·4 to 147·0 parts per 100,000. The Douglas pit water contains 76·0 parts, and that from Muirhead 12·2 parts per 100,000 of suspended solids.

Paper Mills.—21 samples—Moffat Mill, 11 samples; Caldercruix, 9 samples; and Eastfield, 1 sample.

At Moffat the amount of suspended solids in the effluent from the settling ponds varied from a minimum of 9·6 parts to a maximum of 88·4 parts per 100,000.

Caldercruix effluent varied from a minimum of 25·4 to a maximum of 81·6.

Eastfield effluent contained 25·0 parts per 100,000.

Print Works. — Three samples of effluent from Glengowan were examined, and found to contain 3·0, 4·6, and 5·0 parts per 100,000 of suspended solids.

Ammonia Works.—7 samples—Cambuslang Gas Works, 3 samples; and Clyde Iron Works, Bedlay Colliery, Mossend Iron and Steel Works, and Home Seat Level, Wilsontown, 1 sample each.

With the exception of Wilsontown and the Clyde Iron Works, the effluents contained large amounts of phenols.

Samples of Streams.

Total samples, 489, of which 418 were examined for evidence of sewage pollution, and 71 in connection with trade-waste discharge.

Streams affected by Sewage Pollution.—River Clyde, 413 samples; Kittoch Water, 1 sample; burn at Blairbeth Road, Rutherglen, 2 samples; and ditch at Loaningdale, Biggar, 2 samples.

Streams affected by Trade Effluents:—

Samples.		Samples.	
River Clyde,	4	Newton Burn, ...	3
Battles Burn,	1	Glengonnar Water, ...	3
Blind Burn,	1	South Calder. ...	2
Mollins Burn,	1	Allanton Burn, ...	16
Bothlin Burn,	2	Greenfield Burn, ...	3
North Calder,	3	Dippool Water, ...	1
Gateside Burn,	12	Mouse Water, ...	4
Auchter Water,	2	Ravel Burn, ...	1
Spittal Burn,	1	Almond, ...	4
Myers Burn.	1	Pow Burn, ...	3
Shirrel Burn,	2	Light Burn, ...	1

The samples from the Mollins Burn, Bothlin Burn, Shirrel Burn, Auchter Water, and Myers Burn were examined, particularly for phenoloid substances.

The Glengonnar Water was found to contain suspended solids, varying between 118·6 and 433·8 parts per 100,000, and on one occasion the suspended solids were found to contain lead, amounting to 3·4 per cent.

All other samples were examined to determine effect of discharge from various collieries.

Water Supplies.

28 samples of water and 2 samples of water deposit were examined, 25 of these being private supplies and 3 from public water supplies.

Public Water Supplies.

Forth and Wilsontown, a proposed new supply.

Lees Burn supply, High Blantyre, 2 samples.

Private Water Supplies.

UPPER WARD DISTRICT.

Harelaw Farm, Carstairs.—Water not of sufficient purity.

Teaths Farm, Lesmahagow.—An excellent supply.

Summit School.—2 samples. The first sample examined was quite unsuitable. The second sample was of great purity, but contained an excess of suspended solids containing iron.

Gateside Farm, Carluke.—A clean water, but excessive hardness.

Lea Muir Farm, Carluke.—A clean water, but excessive hardness.

Linnmule, Kirkfieldbank.—2 samples. On each occasion this water was reported as of doubtful purity.

Frater's Property, Hawksland.—A water of great purity.

Garngour Farm, Lesmahagow.—A water free from nitrogenous organic pollution, but of unsatisfactory physical character.

Craigbank Farm, Larkhall.—2 samples. A polluted water.

Craigbank Farm, Larkhall.—A polluted water.

Forrestfield Village Supplies. — 3 samples. No evidence of pollution.

Raith Farm, Bothwell.—Unfit for domestic purposes.

Headhouse Farm, East Kilbride. — 3 samples. One sample was reported as unfit for domestic supply, while two were found free from nitrogenous organic matter.

Graynes Farm, Avondale.—2 samples. Unfit for domestic supply.

Blairmuckhill Colliery. — 3 samples. Two of these samples were reported as being free from organic matter, but containing excessive solids and hardness. The third sample was condensed water, and was reported as containing no alkalinity or hardness.

LOWER WARD DISTRICT.

Dryfield Farm, Kirkintilloch.—A polluted water.

Food and Drugs.

503 samples, consisting of sweet milk, 440 samples, skimmed milk, 6; condensed milk, full cream, 2; condensed milk, skimmed, 2; whisky, 36; butter, 11; ham, 2; cream, green peas, tea, and buttermilk, 1 sample each. The deficient samples included 15 samples of milk, 3 samples of butter, and 7 samples of whisky.

Milk of Hygienic Quality.

55 samples of graded milk were analysed, of which 2 samples contained less fat than is required by the Order.

Special Samples.

Total samples, 45. Human milk, 11 samples; wall plaster, 6; soap, 4; cod liver oil emulsion, 3; starch, 2; bean meal, 2; dried milk, 4; sanitary fluid, wine, alkali, tea, linseed cake, slag, dust, turpentine, and white lead, 1 sample each.

For poisonous substances, there was examined 1 sample each of meat, gooseberries, gooseberry jelly, and kidney.

Rivers Pollution Prevention.

SENIOR INSPECTOR, - FRANK M'ARTHUR.

In the years 1903 and 1909 special reports on the subject of rivers pollution were issued to the County Council, and during the year a Third Report, dealing with the subject in a comprehensive manner, was prepared. This Report covers remits made to the County Medical Officer to report on the whole question of pollution by sewage from special drainage districts and other areas, and to put before the County Council in a condensed form the information submitted to the Scottish Board of Health embodying the results of a special survey of all sources of pollution (industrial and sewage) undertaken in 1922 and 1923.

As formerly, the systematic inspection of streams and sources of pollution was carried out by a staff of three inspectors, quarterly reports of the work done being issued to the members of the Public Health Committee.

The work done during the year may be summarised in the following table. All the sources of industrial pollution shown are sources which discharge their effluents to streams, and do not include sources of pollution which discharge their effluents to public sewers:—

TABLE A.—SHOWING SOURCES OF POLLUTION, INSPECTIONS, AND POLLUTIONS DETECTED.

SOURCES OF POLLUTION.				INSPECTIONS.		POLLUTIONS DETECTED.
Nature.		Number.		Number.	Samples.*	Number.
Coal-Dross Washers, - -		74		798	71	76
Lead Washer, - - -		1		3	3	3
Ammonia Works, - - -		19		53	5	6
Paper Mills, - - -		2		37	24	17
Print, Dye Works, &c., -		4		17	3	—
Chemical Work, - - -		1		—	—	—
Total for Industries, -		101		908	106	102
Sewage Purification Works and Outfalls, - - -		-		174	12	—
Streams, &c., - - -		-		2,225	545	—
GRAND TOTAL, - - -		-		3,307	663	102

* The samples analysed are dealt with in the report of the work done in the Chemical Laboratory.

Trade Pollutions.

It will be observed from the above table that the total mining and manufacturing pollutions detected amounted to 102, and that 76 of these were from coal-dross washers.

Coal-dross Washers.—74 were under observation, 798 inspections were made, 71 samples taken, and 76 pollutions detected.

New sources of pollution placed on the register were Coursington Colliery, in the Burgh of Motherwell; Kenmuir and Kenmuirhill, both near Mount Vernon; and Thankerton, Holytown, at all of which preventive measures were adopted.

A coal-dross washer was under construction at Douglas Castle Colliery, Douglas, but was not completed at the close of the year. The small washer at Calderrigg Colliery, near Airdrie, was dismantled.

Pollutions were detected at the following collieries:—

*Allanton.	Hassockrigg.
Baton.	Holytown.
Blantyreferme.	*Jerviston.
Bredisholm.	Knowton.
Broomside.	*Newton.
*Brownieside.	Rosehall.
*Calderrigg.	Stane.
Darngavil.	*Stepends.
*Dechmont.	Tannochside.
*Dewshill.	Thankerton.
*Gartness.	*Viewpark.
*Gateside.	Wilsontown.

*Reported to County Clerk.

Brief reference to the conditions found at the collieries reported to the County Clerk might be made.

Allanton Colliery, near Hamilton.—The method of disposal of the coal-dross washings produced at this colliery has always been unsatisfactory, and has given a great deal of trouble. It consisted of conveying the effluents (coal washings and pit water) for a short distance in a ditch, thence in a pipe to an inundation known as "The Hole," situated close to the River Clyde and about three-quarters of a mile distant from the colliery. The inundation referred

to is an excellent settling area, but, on account of leakages from the pipe, which is laid alongside the burn for a considerable distance, and of unsatisfactory arrangements for diverting the ditch to the pipe, serious pollution was of very frequent occurrence. The question of taking legal proceedings against the owners had from time to time been considered, and was again seriously considered during the year. Further reference is made to this aspect under the heading "Legal Proceedings."

Brownieside Colliery, Plains.—The nature and disposition of the numerous settling ponds at this colliery were found to be unsatisfactory, especially of certain settling ponds situated close to the North Calder Water, which were in such a position that the banks were liable to be washed away in high water. The owners were requested to have improvements carried out.

Calderrigg Colliery, near Airdrie.—The settling ponds at this small colliery were insufficient and did not receive regular cleaning. The washer was, however, dismantled during the year.

Dechmont Colliery, Cambuslang.—The actual occurrence of serious pollution was not frequently detected, but from time to time evidence of such pollution was observed in the Light Burn, and on one occasion (a Sunday morning) serious pollution was detected, due to the improper use of the settling ponds. The taking into the settling ponds of highway and other drainage also made it difficult to maintain a satisfactory effluent from the ponds in wet weather. The record of the colliery was forwarded to the County Clerk, when the question of taking legal proceedings against various persistent industrial polluters of streams was under consideration.

Dewshill Colliery, Salsburgh.—The pollutions detected were of a serious nature, and were due to the unsatisfactory condition of the settling ponds for the effluent from the silt-recovery tank, and also of a surface drainage sump, which, in addition, was of insufficient capacity. Further, there appeared to be gross mismanagement of the preventive measures. Two months were given to the owners to provide satisfactory preventive measures.

Gartness Colliery, Moffat Mills.—Originally the main flow of coal-washing effluent was discharged by an old shaft to disused workings, and was thus satisfactorily disposed of. In April, however, it was

discovered that this method of disposal had been discontinued, and that the washings, combined with a large flow of clean pit water, were entering the North Calder, after passing through silt-recovery ponds. This combined effluent was of a polluting nature, and was added to by leakages from the washer and hopper and wagon drainage. The matter was taken up with the owners, and, ultimately, three months were given to them to provide satisfactory preventive measures. Such measures were duly taken so far as the main flow of washings was concerned, by conveying the effluent to a settling and filtration area, but the other drainage referred to has not yet been satisfactorily dealt with, and is a source of pollution to some extent.

Gateside Colliery, Cambuslang.—The Gateside Burn had frequently been complained of as being polluted by coal-dross washings as it flows through Cambuslang Golf Course. Pollution had actually been detected on several occasions, and the stream showed unmistakable evidence of gross pollution, the polluting effluents having come from either the bing settling pond or the ground surface settling ponds. The preventive measures were regarded as adequate, provided they were properly managed, and for a considerable period in the spring the stream was inspected almost daily, and for a full week in the month of May during the whole of each night, without pollution being detected. About that time, however, the Golf Club threatened to take legal action against the colliery owners, and much better attention was paid to the management of the preventive measures. Improvements were also effected by the abandoning of the settling pond on the refuse bing and the taking in of ground and the formation of new ponds. In addition to the brick-built settling ponds on the ground surface, an earth pond was formed between the burn and the railway to intercept any polluting drainage coming from the former ponds when they are being cleaned out. The result of this action was satisfactory, no pollution or evidence of pollution of any consequence being observed during the remainder of the year. It should be noted that the flow of pit water from this colliery is large, and that it is often very turbid in character. In considering the question of legal proceedings, the record of the colliery from the beginning of 1922 to May, 1924, was forwarded to the County Clerk.

Jerviston Colliery, near Motherwell.—The preventive measures at this colliery, which drains to the South Calder, were considered to be inadequate, especially to deal with discharges from the silt-recovery tank, with the result that serious pollution occurred. A change in the

ownership of the colliery took place in 1923, and several meetings were held with the new owner's General Manager with a view to endeavouring to secure the adoption of satisfactory preventive measures. No practical result came of these meetings, at which the owner's representative explained that, owing to the depression in the coal trade and the working conditions at the mine, the colliery concern (the owners have other large iron and steel interests) was not paying, and that, in fact, the owners were losing heavily. In these circumstances, therefore, while admitting the inadequacy of the preventive measures, he said he could not recommend his Directors to expend any money on additional preventive measures, and, further, stated that if these were insisted on he believed the colliery would be closed. All the circumstances were reported to the County Clerk, and the Public Health Committee, on 3rd December, gave the owners two months in which to provide remedial measures.

Newton Colliery, Newton. — This washer was the cause of very considerable trouble, and the subject of frequent inspection during April, May, and June. The colliery itself was closed down in 1922, but the washer was acquired by another company and continued in use. For some time after the change of ownership the washings from the silt-recovery tank were discharged to the Newton Burn, and were not pumped to the bing as formerly. This was rectified after considerable delay, pumping to the bing being resumed in May, 1923. It was believed, however, from subsequent inspections made of the outfall stream, that serious intermittent pollution was taking place, although a connection from the silt-recovery tank to a drain discharging to the Newton Burn was understood to have been altered so as to prevent the passage of washings from the tank to the burn by this drain. At an inspection made on Sunday, 13th April, however, it was discovered that there was a direct connection from the tank to the drain referred to, leaving no room for doubt, having regard also to the grossly coal-silted condition of the stream and outfall ditch, that gross intermittent pollution was of regular occurrence. Strong remonstrance was at once made to the Company's officials, which culminated in the drainage connection referred to being definitely cut off, to the sight and satisfaction of the Rivers Inspector, and other measures being taken to prevent pollution. These are reported to have proved satisfactory, no pollution or evidence of pollution being observed from the middle of June.

Stepends Colliery, Plains.—Considerable difficulty was experienced in bringing the owners of this colliery, at which a coal-washing plant

was only constructed in 1923, to realise their responsibilities in providing adequate measures to prevent pollution of the North Calder. The circumstances were, therefore, fully reported to the County Clerk in the month of April, and correspondence took place. Ultimately the Company, having been given a period of three months in which to provide satisfactory preventive measures, agreed to construct two brick-built settling ponds to deal with the washings from the silt-recovery tank. These were completed and brought into use at the end of November, and were considered, with the other preventive measures, to be sufficient to prevent pollution provided they received the necessary careful attention. Since then pollution, although not of a serious nature, has been noted and complained of, due to the small settling areas or dams on the bank of the North Calder being unsatisfactory.

Viewpark Colliery, Uddingston.—The settling areas or ponds on the bing at this colliery had been unsatisfactory, resulting in serious intermittent pollution of the Pow Burn. Lesser pollution, which was easily dealt with, however, also occurred from two other sources. To deal with the serious pollution from the bing ponds an effort was made to form a new pond, but, progress with this work being very slow, the matter was reported to the County Clerk and Public Health Committee, and a period of two months was given to the owners to put things right. Subsequently a meeting was held with the owner's General Manager, when he agreed to take immediate steps to strengthen and increase the existing settling area, and also to make use of a considerable area of ground at the base of the bing, which had shortly before come into the possession of the Company, as a settling area. The bing pond referred to as being in course of formation was not proceeded with further, as it was not considered suitable for the purpose intended. These measures were completed within the time given to provide satisfactory means for preventing pollution, and proved satisfactory.

Reference might also be made to the following collieries which were sources of pollution, but at which remedial measures were taken without having to specially report the circumstances to the County Clerk.

Bredisholm Colliery, near Uddingston.—A silt-recovery tank was under construction during part of the year.

Blantyreferme Colliery, Uddingston.—Serious pollution of the River Clyde, due to discharges from the silt-recovery tank, was

detected in the month of March. Inspection showed that there was an escape of a large volume of washings from a drain connecting with a collecting pond, from which the washings are pumped to a pond on the refuse bing for purification. From the observations made, there was reason to believe that pollution had been occurring for some time, not only because of the escape of effluent referred to, but probably also on account of wilful discharges from the collecting pond. The matter was taken up with the colliery management, who had the defective drain repaired, an outlet pipe from the collecting pond to the River Clyde cut off, and some surface drainage, liable to cause pollution, taken into the collecting pond. These measures removed cause for complaint.

Rosehall Colliery, Bellshill.—In view of the unsatisfactory condition of the means for intercepting the effluents from the silt-recovery tank, &c., for pumping to the refuse bing, resulting in the occurrence of serious pollution of the North Calder Water, a meeting was held with the owner's general manager on 26th March, when the matter was fully discussed and improvements agreed on. These improvements were duly carried out, and there was no reason to complain of pollution during the rest of the year.

As in former years, new measures or improvements were effected at a considerable number of collieries, mostly after negotiation between the inspectors and the colliery officials, while, in order to maintain preventive measures in satisfactory order, minor improvements were carried out in many instances, as attention was drawn to their necessity by the inspectors. The improvements obtained during the year may be referred to.

Auchlochan No. 6 Colliery, Coalburn.—A new settling area was arranged for, and was brought into use in the month of April.

Hirstrigg Colliery, Salsburgh.—A small pond was constructed at the base of the bing.

Milnwood Colliery, Bellshill.—An area of ground was banked up so as to form two large settling areas, to which all the washings are conveyed. This was done early in the year, and the settling tanks previously used have been discarded.

Quarter Colliery, Quarter.—An extensive settling area was formed.

Stane Colliery, Shotts.—A pond was formed at the base of the bing.

Wilsontown Colliery, Wilsontown.—A large new settling area was formed.

LEAD WASHER.—Three inspections were made at this washer and of the Glengonnar Water during the year. The effluent was found on each occasion to be unsatisfactory, and the conditions were reported to the County Clerk.

AMMONIA WORKS.—The number of ammonia works on the register is 19. These include blast furnaces and gas works in burgh areas. The number of inspections made during the year was 53; 5 samples were taken; and 6 pollutions detected. As in the preceding year, most of the blast furnaces were not in operation. The pollutions reported occurred in connection with Cambuslang Gas Works, Uddingston Gas Works, and Mossend Steel Works, all of which were reported to the County Clerk and were considered by the County Public Health Committee. No means of purification are now in operation at the two gas works referred to. Mossend Steel Works were only in intermittent operation during the year.

MANUFACTORIES.—Excluding sources of manufacturing pollution which drain to public sewers, the number on the register is 7. These include Caldercruix and Moffat Paper Mills, Glengowan Print Works, Cambuslang Dye Works, Avonbank Bleach and Dye Works, Carmyle Bleach Works, and Tannoch Chemical Works. Fifty-four inspections were made, 27 samples taken, and 17 pollutions reported during the year, all of which were from Caldercruix and Moffat Paper Mills, there being 10 from the former and 7 from the latter. Serious pollution at Caldercruix Mills was continuous throughout the year, and the matter was specially considered by the Public Health Committee. These sources of pollution are further referred to under the heading “Legal Proceedings.”

LEGAL PROCEEDINGS.—At a meeting of the Public Health Committee, held on 30th April, when a number of reports with regard to pollution from coal-dross washers, ammonia works, and paper mills, &c., were under consideration, instructions were given to the Clerk, in consultation with the County Medical Officer, to take the necessary steps with a view to the institution of legal proceedings in those cases in which, in their opinion, such a course was justified. Subsequently,

the County Clerk communicated with the Scottish Board of Health on the subject, and transmitted to the Board the records of Allanton, Dechmont, and Gateside Collieries, with the suggestion that representatives of the Board might inspect these and other sources of pollution, so that they might be better able to appreciate the difficulties met with in controlling pollution. This course was agreed to, and on 17th July the Board's Chief Engineer and an assistant, accompanied by the Chairman of the Public Health Committee, County Clerk, County Medical Officer, and Chief Rivers Inspector, inspected these collieries, as well as other sources of pollution. On 21st July inspections were also made at Moffat Paper Mills, Caldercruix Paper Mills, Gartness and Stepends Collieries—all sources of pollution of the North Calder. A full report of the inspections made is contained in an Appendix to the minute of meeting of the Public Health Committee, held on 6th August, and the following excerpt from a letter from the Board, dated 29th July, shows the action it was agreed should be taken, viz. :—

* * * * *

“The Board understand that it was agreed at the discussion, which Mr. Ronald had with the Convener and you after his inspection was completed, that it would be preferable meantime to communicate with the owners of Dechmont and Gateside, intimating :—

- (1) that, in view of the conditions observed at the inspection carried out by Mr. Ronald, when the works for the purification of the wash water were found to be in good order and sufficient to produce a satisfactory effluent if properly attended to, the Local Authority would not, meantime, institute the proceedings contemplated; but
- (2) that, if further pollution arose, the Local Authority would institute proceedings forthwith, subject to the Board's consent being obtained.

“With regard to Allanton Colliery, the Board understand that it was agreed that the Local Authority should intimate to the owners that the Board's Engineer had found the pipe conveying the wash water to the ‘hole’ behind the River Clyde in a leaky and defective condition, causing pollution of the adjacent burn and the Clyde, and should give the Company one month to intimate what remedial measures they propose to adopt. The Board understand also that it was proposed that the Local Authority, if they were assured that the Company would agree to execute certain works, would give the Company three months in which to complete their operations. In the case of failure of the Company to intimate their decision to execute suitable remedial measures or to carry them out within the prescribed period, the Board understand that proceedings will be taken, subject, in this case also, to their sanction.”

* * * * *

The owners of the three collieries concerned were communicated with by the County Clerk accordingly.

With regard to the sources of pollution inspected on 21st July, it was agreed to make the following recommendations:—*Moffat Paper Mills*.—It was considered that the existing preventive measures were satisfactory, provided they continued to receive the necessary careful attention. *Caldercruix Paper Mills*.—In view of the assurance of the Managing Director of the intention to reconstruct the existing settling ponds, and to adopt other measures to obviate pollution, and of evidence of work being carried out with that object, it was decided that a further period of six months should be allowed in which to complete the proposed works. *Gartness Colliery*.—It was agreed to recommend that the owners should be required to provide satisfactory preventive measures within a period of three months, and that, in the event of failure to do so, or if after having provided such measures, pollution should occur due to mismanagement or improper use of these measures, legal proceedings would be taken against them. *Stepends Colliery*.—Similar action was agreed on. The Public Health Committee approved of the suggested action.

The preventive measures at Dechmont and Gateside Collieries continued to be satisfactory, while preventive measures were duly provided at Gartness and Stepends Collieries. These measures, while not entirely satisfactory in minor details, removed cause for serious complaint. With regard to Allanton Colliery, the period given to the owners to provide satisfactory preventive measures expired on 29th November, and it was found at an inspection made early in the month of December that the remedial measures which had been proposed to be taken were not completed. This was reported to the Public Health Committee, who, after consideration, allowed them a further period of two months to carry out these proposed works. At Caldercruix Paper Mills the work of reconstructing the settling ponds was not completed within the period stipulated, and an extension of time was also given in this case. At Moffat Paper Mills the conditions continued to be such as not to give rise to serious complaint.

Solid Matter Pollution.

The method of disposal of the ashes produced at Hallside Steel Works Pumping Station, near Uddingston, referred to in the preceding year's report, has continued to obviate cause for complaint. The owners of Avonbank Bleach Works, Larkhall, were called upon to discontinue the practice of depositing ashes from certain of their

boiler fires on the bank of the Avon in such a manner as to create a statutory offence. There is difficulty, however, in finding a suitable tip for these ashes here, and the matter was not satisfactorily disposed of. At Tannoch Chemical Works, near Luggiebank, and in the Dumbartonshire area, there was also ground for complaint on account of the depositing of ashes in the Luggie. The attention of the Dumbartonshire authorities was drawn to this contravention of the Rivers Pollution Prevention Act. No other instances of serious pollution by solid matter was reported or observed during the year.

Sewage Pollution and Sewage Disposal.

In connection with sewage pollutions 174 inspections were made and 12 samples taken.

SPECIAL DRAINAGE DISTRICTS.—*Aitkenhead and Tannochside.*—As mentioned in the report for the preceding year, purification works, with an outfall to the Ravel Burn to deal with the sewage from the northern portion of Tannochside Old Rows were constructed and brought into operation during the year.

Barony.—It was agreed to reconstruct Westthorn Sewage Purification Works to activated-sludge methods of purification.

Bishopbriggs and Auchinairn.—The diversion and extension of the outfall sewer and the construction of new sewage purification works on activated-sludge principles are being proceeded with. The site of the new works is lower down the Bishopbriggs Burn, on Jellyhill Farm.

Carluke.—The construction of the tank and relative works referred to in the report for the preceding year was completed at the end of June. Sewage conveyed by the Station Road and Jock's Burn outfalls now receives tank treatment before it is irrigated. By arrangement with the farmer a field on Upper Shieldhill Farm can also now be utilised for irrigating crude sewage from the Jock's Burn sewer outfall.

Carstairs.—To deal with the sewage from this recently formed district, which includes the Carstairs Village housing scheme, a septic tank and sludge pit were constructed on the Flush Burn.

Coalburn. — The sewerage system in the Bellfield area was extended so as to provide drainage facilities for Bellfield Rows. A

commencement was made with the cleaning of the tanks for the first time at the Muir Burn purification works towards the close of the year. The hire of a motor pump for this purpose was obtained from the Middle Ward District Committee.

Rutherglen.—Serious pollution of the River Clyde, due to the defective condition of the joint-intercepting sewer both in the Lower Ward area and the Burgh of Rutherglen, was reported on early in the year.

Salsburgh.—Sewage purification works on the Shotts Burn, providing for tank treatment only, were under construction during the year. These works only deal with part of the drainage from this district, but take in the whole of the sewage from the housing scheme, most of which is outwith the special district. The estimated cost of the works and outfall sewer was £3,000.

Stonehouse.—The field acquired and prepared for the irrigation of the sewage from the main outfall was brought into use during the year. Subsequently, complaints of nuisance arising from the field were received. These complaints were inquired into by officials concerned, and by a sub-committee, who were unable to find any cause for complaint. Simultaneously, the occupiers of Cander Mill complained that the sewage effluent rendered the water of the Cander stream unsuitable for stock to drink.

Populous Places Outwith Special Drainage Districts.

Bowhousebog, Hartwood.—The construction of drainage and sewage disposal works, designed by the Middle Ward District Engineer, for this village, which is owned by the Lanark District Board of Control, was completed in the month of February.

Glasford.—In connection with the question of sewage disposal at Glasford, which had been under consideration for a long period, a sewer was constructed, and a field acquired in which to construct a tank and for irrigation. These works were completed during the year.

Kirkfieldbank.—In connection with a requisition to form the village of Kirkfieldbank into a special drainage district, the Upper Ward District Engineer submitted a scheme of drainage and sewage disposal, estimated to cost £2,050. In view, however, of the insufficiency of the water supply pipes to meet further considerable

demands on them, the District Committee agreed not to form the district.

Overtown. — Negotiations for acquiring ground for alternative schemes of purification for the sewage from the housing scheme and some other properties at Overtown took place during the year, and the District Committee have agreed to proceed with a scheme of tanks and filters, at an estimated cost of £4,200. Proposals were made that the purification works should meet the needs of the whole of the village of Overtown, and that the necessary sewers should be constructed. The estimated cost of these schemes was:—tank and filters, £10,800; sewers for Overtown Village, £4,650; making a total of £15,450, exclusive of cost of land, wayleave, &c. These larger proposals have, however, been deferred.

BURGHs.—*Burgh of Lanark.*—An inspection was made at the sewage purification works on 12th March, when samples were taken for the purpose of ascertaining by analysis whether they showed evidence of spent ammoniacal liquor, which the Burgh Surveyor was of opinion was the cause of excessive frothing of the crude sewage as discharged at the works by the high-level sewer. This condition was probably due, however, to the presence of tannery effluent in the sewage, as no phenols were found in any of the samples. The presence of froth on the surface of the Clyde was a feature of the complaints made in 1922 of pollution of the river, which was traced to these works.

Burgh of Motherwell and Wishaw. — The reconstruction of the filter bed at Coursington Sewage Purification Works, referred to in the report for the preceding year, was completed, the filter being brought into operation during the Summer. The work cost about £2,500.

An inspection was made, in company with the Joint Burgh Surveyor, in the Globe district of the Burgh, in connection with a modified scheme he had under consideration for dealing with this outfall, which discharges to the South Calder. Under the schemes ordered by the Court for dealing with the sewage of the late Burgh of Motherwell, the drainage of the Globe area had to be conveyed to a site for purification works on the Gilly's Burn, but the Joint Burgh Surveyor proposed to suggest that it would be more economically dealt with by itself.

Streams.

In connection with trade and sewage pollutions, 2,225 inspections were made and 545 samples taken. The samples include special weekly samples of the River Clyde and certain of its tributaries, which are referred to in the report of the work done in the Chemical Laboratory.

The following complaints of alleged pollution of streams were investigated and reported on:—

River Almond.—Several complaints of pollution of the Almond were received. These related to (a) pollution near its source by coal-dross washings from Hassockrigg Colliery, and (b) to alleged pollution in the lower reaches at Polkemmet. In the former instance the complaints were made by the farmer at Easter Baton, through whose lands the headstream of the Almond flows. The pollution complained of came from Hassockrigg Colliery, where, while the preventive measures were, speaking generally, satisfactory, difficulty was experienced in dealing with leakages from various parts of the washer, which should have been conveyed to an underground sump, but which escaped with pit water through a defect in the drainage system. Every effort was made to minimise pollution from this source, and the bed of the stream was cleaned out from the colliery to the bridge at Easter Baton Farm.

The complaint of pollution in the vicinity of Polkemmet was made in November by the factor on Polkemmet Estate, who alleged pollution by “coal-washings and water from pits in the neighbourhood of West Benhar.” Careful inquiries were made into this complaint and the complainer interviewed. From information obtained, the source of pollution was found to be Muirhead Colliery, situated at West Benhar, from which there was being raised a large volume of irony mine water, which has a marked polluting effect on the stream, even although it is passed through a large settling pond at the colliery. No water had been raised from this pit from the time of the coal dispute in 1921 until the month of August, and after the complaint was received pumping operations had again been discontinued, although, as the coalfield is being developed, pumping will probably be resumed. This form of pollution cannot in any case be dealt with under the Rivers Pollution Prevention Acts. With regard to the allegation of pollution by coal-dross washings, no information could be obtained of any recent conditions which could affect the River Almond where complained of. Two collieries (Baton and

Hassockrigg) with coal-dross washers drain to the stream, but both are situated long distances from Polkemmet.

Clyde, near Camp Bridge.—Complaints were again made in July and September with regard to the discharge of coal-dross washings to the Clyde in this area, where the outfall from Broomside Colliery is from time to time of a polluting nature. Steps were taken at the colliery to prevent pollution as far as possible.

Clyde at Eastfield, near Cambuslang.—One of the outfalls from Clydebridge Steel Works was observed on several occasions to contain a considerable amount of oily matter, which affects the River Clyde, and was the subject of complaint. The attention of the owners was drawn to the condition, and they endeavoured to improve the existing means for preventing pollution of this nature.

Oily or other pollution of the Scion Burn, a small tributary of the Clyde below Clydebridge Steel Works, was also complained of. This source of pollution was found to be the large laundry, cleaning, &c., premises at Eastfield, and means were taken to prevent a recurrence of such pollution.

Food and Drugs.

Senior Inspector and Sampling Officer, - CHAS. MACARA.

The work under the Sale of Food and Drugs Acts and relative Regulations and Orders is carried out by two inspectors. The following table shows the yearly average number of inspections, administrative samples taken and analysed, and the percentage found not genuine, and the total samples taken for experimental purposes, for the four quinquennial periods from 1900-1919, and the annual figures for the years 1920-1924 :—

Years.	Inspections.	Administrative Samples.			Experimental Samples.
		Procured.	Analysed.	Percentage Not Genuine.	
1900-04,	- 616	338	316	11·27	—
1905-09,	- 828	487	480	12·64	—
1910-14,	- 789	574	558	12·16	2,864
1915-19,	- 373	340	326	12·96	71
1920,	- 702	581	572	7·34	111
1921,	- 886	612	602	8·30	50
1922,	- 830	790	784	8·16	87
1923,	- 731	423	420	8·09	52
1924,	- 872	861	855	9·94	237

The samples procured throughout the County and in the Burgh of Biggar amounted to 861 (exclusive of 237 taken in connection with special investigations), which is in the ratio of 2·70 per 1,000 of the population.

The following tabular statement shows the manner in which samples were procured, the number analysed by the Public Analyst, and the number examined in the County Chemical Laboratory :—

Samples procured formally,	-	-	-	-	578
Samples procured informally,	-	-	-	-	202
Samples received privately,	-	-	-	-	81
Analysed by Public Analyst,	-	-	-	-	588
Examined in Chemical Laboratory,	-	-	-	-	267
Not analysed,	-	-	-	-	6

The samples not analysed consisted of the following :—Sweet Milk, 3; raspberry jam, 2; cream of tartar, 1.

TABLE A.—ALLOCATION OF WORK DONE DURING 1924, UNDER THE FOOD AND DRUGS ACTS, ACCORDING TO PARISHES IN THE THREE DISTRICTS OF THE COUNTY, AND FOR THE BURGH OF BIGGAR.

	Visits to Parish.	Inspections Made.	Samples Procured	Samples found Non-genuine.
<i>Upper Ward Parishes—</i>				
Carluke, - -	7	32	29	2
Carmichael, - -	1	2	2	—
Carnwath, - -	4	36	26	1
Carstairs, - -	2	7	6	—
Covington, &c., - -	4	7	—	—
Crawford, - -	2	13	11	1
Crawfordjohn, - -	2	5	2	1
Coulter, - -	1	2	3	—
Dolphinton, - -	1	3	—	—
Douglas, - -	3	11	15	—
Lamington, - -	1	1	1	—
Lanark, - -	2	3	2	—
Lesmahagow, - -	14	73	100	8
Symington, - -	2	2	—	—
Walston, - -	1	1	3	—
Wiston, - -	1	2	2	—
	48	200	202	13
<i>Middle Ward Parishes—</i>				
Avondale, - -	4	20	23	2
Blantyre, - -	12	54	42	10
Bothwell, - -	32	181	175	25
Cambuslang, - -	10	52	47	2
Cambusnethan, - -	9	22	28	3
Dalserf, - -	10	47	34	2
Dalziel, - -	1	1	—	—
East Kilbride, - -	7	22	23	4
Glasford, - -	5	12	18	—
Hamilton, - -	9	20	26	2
New Monkland, - -	7	43	36	2
Old Monkland, - -	13	52	43	4
Shotts, - -	7	52	60	3
Stonehouse, - -	3	15	21	5
	129	593	576	64

TABLE A.—*Continued.*

	Visits to Parish.	Inspections Made.	Samples Procured.	Samples found Non-genuine.
<i>Lower Ward Parishes—</i>				
Glasgow (late Barony),	7	21	25	5
Cadder, - -	6	27	23	—
Carmunnock, -	3	7	6	1
Rutherglen, -	3	10	10	2
	19	65	64	8
Burgh of Biggar,	2	14	19	—
Total, - -	198	872	861	85

The nature of the articles procured during the year, the number of each article analysed or examined, and the number found not genuine are recorded in Table B. Of the 855 samples analysed, 85, or 9·94 per cent., were found not genuine. Six samples were not analysed.

TABLE B.—SHOWING THE NATURE AND NUMBER OF SAMPLES PURCHASED AND RECEIVED, THE NUMBER ANALYSED, AND THE NUMBER FOUND NON-GENUINE.

Article.	Procured.	Analysed.	Non-genuine.
Sweet Milk, - - - -	684	681	59
Skimmed Milk, - - - -	11	11	—
Cream, - - - -	2	2	—
Condensed and Dried Milk, -	13	13	—
Buttermilk, - - - -	2	2	1
Cream Filling, - - - -	1	1	—
Double Cream, - - - -	1	1	—
Sponge Cakes, &c., - - - -	3	3	—
Butter, - - - -	21	21	4
Dripping, - - - -	2	2	—
Cheese, - - - -	3	3	—
Sausages, - - - -	10	10	—
Shredded Suet, - - - -	1	1	—
Ham and Bacon, - - - -	2	2	—
Whisky and Diluted Spirits, -	75	75	21
Rum, - - - -	2	2	—
Beer, - - - -	1	1	—
Port Wine, - - - -	1	1	—

TABLE B.—*Continued.*

Article.				Procured.	Analysed.	Non-genuine.
Raspberry Cordial,	-	-	-	2	2	—
Raspberry Jam, -	-	-	-	2	—	—
Fruit Salad, -	-	-	-	1	1	—
Frozen Eggs, -	-	-	-	1	1	—
Liquid Eggs, -	-	-	-	1	1	—
Preserved Peas,	-	-	-	2	2	—
Vinegar, -	-	-	-	5	5	—
Tinned Tomatoes,	-	-	-	1	1	—
French Capers, -	-	-	-	1	1	—
Cream of Tartar,	-	-	-	2	1	—
Cinnamon, -	-	-	-	1	1	—
Syrup, -	-	-	-	2	2	—
Oatmeal, -	-	-	-	1	1	—
Olive Oil, -	-	-	-	1	1	—
Tea, -	-	-	-	1	1	—
Coffee, -	-	-	-	2	2	—
Total, -	-	-	-	861	855	85

The following tabular statement shows the number and results of cases of legal proceedings:—

				Legal Proceedings.	Convictions.	Dismissed or Not proven.
Sweet Milk, -	-	-	-	14	11	3
Whisky, -	-	-	-	5	4	1
Total, -	-	-	-	19	15	4

MILK. — Table B shows that 681 samples of sweet milk were analysed, and 59 certified to be not genuine, but when the analyses of all the samples are compared with the presumptive standard set up by the Board of Agriculture in 1901 (3 per cent. fat and 8·5 per cent. solids not fat), which standard is now recommended as a legal limit by the Inter-Departmental Committee on Milk (Scotland), we find there are altogether 77 deficient samples, 18 samples being slightly low in one or other of the constituents of milk, although certified by

the Public Analyst to be genuine. The total samples may be classified as follows :—

On and above standard in fatty and non-fatty solids, -	604
Under standard in both fat and non-fatty solids, -	5
Under standard in fat only, - - - -	48
Under standard in non-fatty solids only, - - -	24
	<hr/>
	681
	<hr/>

Of the samples of sweet milk, 162 were from producers who sell wholesale, 321 from producers who sell retail, two from wholesale-retailers, and 196 from retailers who buy their milk either from a producer or wholesaler. From the analyses of the samples taken from each of these sources the following averages have been calculated, viz. :—

	Number of Samples.	Milk fat per cent.	Solids not Fat. per cent.
Producer-Wholesaler, - -	162	3.56	8.84
Producer-Retailer, - -	321	3.64	8.93
Wholesale-Retailer, - -	2	3.30	8.80
Retailer, - - - -	196	3.48	8.94
Average of all Samples for year, 681		3.57	8.92

Where the deficiency in any of the constituents of milk does not exceed 5 per cent. and there is no evidence to suggest tampering, it has been agreed, for administrative purposes, to give the vendor of the sample a written caution in the first instance. Moreover, every case of deficient sweet milk is investigated with a view to finding out the party responsible for it. Thus, in a 4 per cent. deficiency against a retailer, samples were taken in course of delivery at the farm where the milk was delivered as morning (warm) and previous evening (cold). After the sampling of the separate milkings, the farmer divulged that he had instructions from the retailer to cream two plates of the previous evening's milk, and deliver two pints of cream. As this would account for the deficiency, action was taken against the retailer, and a conviction followed. In other two deficiencies—(1) 10 per cent. in milk fat and 5 per cent. in non-fatty solids; and (2) 26 per cent. in milk fat—where retailers were implicated, sampling in course of delivery showed that the milk was deficient, and as a result proceedings were instituted against the producers.

In connection with deficient samples, four "appeals to the cows" were made, the herds comprising 2, 12, 17, and 18 cows respectively. The cows were milked in presence of the inspector, and samples taken from the individual cows. Analysis showed the mixed milk of the herds to be of excellent quality. Only in the larger herds (17 and 18 cows) did any of the cows yield milk below the standard. In the herd of 17 cows, one of the cows yielded milk low in milk fat—viz., 2·7 per cent.—while six of them were slightly low in non-fatty solids—viz., 8·4 per cent.—over the morning and evening milkings. The mixed milk of the herd was of excellent quality, the analyses being 3·7 per cent. of milk fat and 8·7 per cent. of non-fatty solids for both milkings. In the herd of 18 cows, two cows fell in milk solids other than milk fat to 8·2 and 8·1 per cent. at the evening milking, and two cows fell in milk fat to 2·7 and 2·9 per cent. at the morning milking. The average analysis, calculated on the yield of each cow was 4·3 per cent. of milk fat and 8·8 per cent. of milk solids other than milk fat for the evening milking, and 3·5 per cent. of milk fat and 9·1 per cent. of milk solids other than milk fat for the morning milking.

In another case a sample taken from a retailer who had newly started distributing milk from a motor lorry showed a 15 per cent. deficiency in milk fat. Sampling in course of delivery from the farmers showed that the milk was genuine as the retailer received it. To test the possibility of the cream having risen to the top of the can through standing on the smooth-running motor, a sample was drawn from the tap at the bottom of a tall 10-gallon can at the same place and time as the original official sample was procured. Another sample was then drawn after the contents of the can had been thoroughly mixed by means of a plunger. Analysis of these samples showed the first sample to be 20 per cent. deficient in milk fat, while the second sample was genuine. The case against the retailer was not proceeded with, but he was cautioned to keep the milk thoroughly mixed.

As motor lorries are largely displacing horse-drawn vehicles in the distribution of milk, some further investigations were made with tall cans on motor lorries, and the following gives the details of the tests:—

Test 1.—A sample taken from an 8-gallon tall cylindrical can newly filled with morning milk, and placed on the back of a retail motor lorry at 8 a.m. was 4·2 per cent. of fat and 9·5 per cent. of solids not fat. After travelling $5\frac{1}{2}$ miles over a rough road, a sample taken from a tap at the bottom of the can at 8.25 a.m. still

showed the same analysis. Subsequent samples taken during the round of distribution when the can was about $\frac{3}{4}$ full, $\frac{1}{2}$ full, and nearly empty, at the following times, 9 a.m., 9.25 a.m., 10 a.m., and 10.45 a.m., showed 4.1, 4.3, 4.2, and 4.2 per cent. respectively of milk fat with the figures for non-fatty solids the same as the original analysis.

Test 2.—Two cylindrical cans 14 inches in diameter and 37 inches high, each holding 10 gallons of milk, were filled full at 6.15 a.m., one with previous evening milk and one with morning milk. Samples taken then showed the previous evening milk to be 3.7 per cent. milk fat, and 9.4 per cent. non-fatty solids, and the morning milk 3.8 per cent. of milk fat and 8.9 per cent. non-fatty solids. An inspector accompanied the lorry on its rounds and at 8.25 a.m., the commencement of distribution, took a sample from the taps at the bottom after the cans had stood for 2 hours 10 minutes, while the lorry passed over 5 miles of rough road. Analyses of these samples showed that the previous evening milk was 2.7 of milk fat and 9.2 non-fatty solids, and the morning milk 3.8 per cent. of milk fat and 9.2 per cent. of non-fatty solids. Samples were subsequently taken from each can when they were $\frac{3}{4}$ full, $\frac{1}{2}$ full, $\frac{1}{4}$ full, and nearly empty. In the case of the morning milk these were taken at 8.35 a.m., 8.50 a.m., 9.10 a.m., and 9.20 a.m., and in the previous evening milk at 9.50 a.m., 10.20 a.m., 10.50 a.m., and 11.10 a.m. Analyses of these samples show in the morning milk 3.9, 3.9, 3.9, and 3.8 per cent. of milk fat, and all 9.2 of non-fatty solids, and in the previous evening milk 3.7, 3.9, 3.9, and 3.9 per cent. of milk fat and all 9.4 per cent. of non-fatty solids. In this test the only sample which calls for notice is the first sample of the cold milk taken at the commencement of distribution after the milk had stood for 2 hours 10 minutes. The milk fat was 2.7 per cent., or a loss of 1 per cent. on the original analysis. The subsequent samples show that the milk has become mixed again.

Test 3.—The same can as used in Test 2 was filled with 9 gallons of previous evening milk at 6.15 a.m. A sample taken then showed on analysis 3.7 per cent. of milk fat and 9.2 per cent. of non-fatty solids. After travelling about 5 miles of rough roads a sample taken from a tap at the bottom of the can at 8.25 a.m. showed on analysis 3.5 per cent. of milk fat and 9.2 per cent. of non-fatty solids. Samples were subsequently taken when the can was $\frac{3}{4}$ full, $\frac{1}{2}$ full, and $\frac{1}{4}$ full at 11 a.m., 11.20 a.m., and 12.15 a.m. respectively. The analysis of these are respectively 2.8 per cent., 3.4 per cent. and 4.2 per cent. of milk fat, while the figures for non-fatty solids are practically unchanged. In this test only one of the samples falls below the standard, namely, 2.8 per cent. of milk fat, or a loss of .9 on the original analysis, after the very severe test of the can standing for about 5 hours on the motor lorry.

Test 4.—In this experiment carried out with the same can on the same lorry going the same round as Test 3, a 10-gallon can was filled full with previous evening milk at 7 a.m., and showed an analysis of 3.5 per cent. of milk fat. A sample taken at 8.30 a.m., after the motor had travelled 6 miles over rough road to the place

of distribution, showed 2·6 per cent. of milk fat. Samples were then taken about every half-hour until the retailer commenced selling from the can. In this way four samples were taken, at the following times: — 9.5 a.m., 9.35 a.m., 10.5 a.m., and 10.35 a.m. These samples showed, on analyses, 2·4 per cent., 2·4 per cent., 2·3 per cent., and 2·3 per cent. of milk fat. At 11.5 a.m., when the can contained nine gallons, a sample taken showed 2·0 per cent. of milk fat, and samples taken thereafter, when the can was three-quarters full, half full, and quarter full, and nearly empty, between 11.25 a.m. and 12.45 p.m., showed 2·4, 3·5, 4·6, and 4·6 per cent. of milk fat.

The results of these investigations would seem to indicate that the use of motor lorries for the distribution of milk keeps the milk contained in cans much more quiescent than in horse-drawn vehicles, the jolting and rolling of which, as was shown in former investigations, kept the milk well mixed. Fresh morning milk, the above investigations show, remains homogeneous longer and shows practically the same analyses throughout. In the case of previous evening's milk, however, there is undoubtedly a tendency for the cream to separate out and rise to the top. The onus, therefore, is placed upon retailers of milk by motor lorries to take the necessary precautions to keep the milk in the cans well mixed. A circular letter was issued to all producers and retailers of milk in the County drawing attention to this matter.

It was decided by the Public Health Committee to make a nominal charge of 2s. 6d. per sample for milk received privately from farmers, creameries, and dairykeepers for analysis in the County Laboratory, when the analyses were desired for their own information (see minute, 26th March, 1924).

245 samples were taken or received privately from creameries. Analyses showed that the milk sent to creameries by some farmers was deficient or just on the standard, indicating that the milk had been tampered with. The results of analyses were reported to the managers of the creameries, who gave the defaulting farmers notice that, if the milk did not improve, the authorities would be requested to take official samples under the Food and Drugs Acts. The warning was generally sufficient to effect an improvement.

An official sample was taken from one of the farmers, and an appeal made to his three cows. The cows yielded genuine milk. Legal proceedings followed, and a conviction was obtained. In this connection it may be stated that the system in vogue at creameries of paying for milk by weight at a flat rate may have the effect of putting a premium on tampering with milk. Bulk-for-bulk milk high in milk

fat weighs less than milk partially skimmed or adulterated by the addition of water. Payment by results or on the average amount of milk fat in the milk would be more satisfactory, and would doubtless improve the milk supply delivered to creameries. This question came before the Council, and the County Clerk was instructed to communicate with the creameries in the County bringing the matter to their notice.

Forty-five letters were sent to producers and retailers of milk from whom official samples were taken, and who at the time of sampling asked to be informed of the results of analysis.

MILK OF SPECIAL QUALITY.—In making investigations and taking samples in connection with the granting of licences and the sale of milk under the Milk (Special Designations) Order, 36 inspections were made during the year, and 53 samples taken for examination in the County Laboratories. Two of the samples were bottled milk sold as “pure clean milk,” although it was stated at the time of purchase to be pasteurised milk. Both these samples had high bacterial counts, and coliform bacilli were present in ‘01 c.c.

SKIMMED MILK.—Eleven samples of skimmed milk were procured, but in four of these the analyses showed too high a figure for milk fat in skimmed milk. The probability is that they would be sold to the public as sweet milk.

CREAM.—Two samples were procured, and the analyses showed they were of poor quality. In one case the suggestion was that water had been added, but owing to the absence of a standard no action was taken.

BUTTER.—Of the twenty-one samples purchased, no case occurred throughout the year of selling margarine for butter, and all were within the standard of 16 per cent. of water. Four informal samples, which were supplied in margarine wrappers, were classified as non-genuine. One sample was received privately from a trader, who said it had been returned to him with the complaint that it had been sold as butter. On analysis it turned out to be margarine, but the vendor gave the assurance that it was not sold by him.

WHISKY.—Seventy-five samples (39 formal and 36 informal) were procured, and 21 were certified non-genuine, in respect that they were under the statutory limit for strength (35 degrees under proof), or the notice given as a protection under Section 8 of the 1875 Act

was inadequate. Two of the samples were supplied as diluted spirits. Legal proceedings were taken in connection with five formal non-genuine samples. Convictions were obtained in three of these, but in the other two Sheriff Dods dismissed the cases, as he held that the notices exhibited were an adequate protection. In one of these cases, where the inspectors had only seen the corner of the notice attached to the cask, and had not seen what the notice was until they had changed their position at the bar, an appeal was made to the Court of Session. The Sheriff-Substitute's decision was reversed by the Court of Session, the Judgment being as follows:—

Justiciary Appeal Court,
COPY INTERLOCUTOR,
PATTERSON *v.* FINDLAY.

Act. T. G. Robertson, K.C., *et* James Stevenson.
Alt. Keith.

Edinburgh, 12th March.

The Lord Justice-General and Lords Commissioners of Justiciary, having considered this appeal and heard Counsel for the parties, Answers the question in the case in the negative : Sustains the Appeal : Recall the determination of the Inferior Judge appealed against the Decern : Remit to the Sheriff-Substitute who tried the case to proceed as accords : Finds the Appellant entitled to expenses, which modify to Ten Guineas, for which and one pound as the dues of Extract, Decern against the Respondent.

J. M. CLYDE.

HIGH COURT OF JUSTICIARY.

OPINION OF THE LORD JUSTICE-GENERAL

ON STATED CASE

I.C.

JOSEPH HUME PATTERSON

v.

HELEN FINDLAY.

12th March, 1925.

In this case the facts are that the respondent's barman was asked for "a half-mutchkin of whisky"; that the barman inquired if the purchaser wanted "Special"; that the purchaser replied, "No, just ordinary"; and that the purchaser was thereupon supplied with a

diluted spirit which was of less strength than 35 under proof. A spirit so diluted is not whisky (see *Brander v. Kinnear*, 1923, J.C. 42; also *Rodburn v. Hudson* (1925), 1 K.B. 225); and certainly not ordinary whisky. It was suggested that "ordinary whisky" is a description used with a secondary and sinister meaning, but there is no evidence of this whatever.

The ground upon which the learned Sheriff-Substitute proceeded in holding the respondent not guilty was that it was proved that, on a barrel behind the bar from which the whisky delivered to the purchaser was drawn, there was affixed a label containing the words:—"Sale of Food and Drugs Acts, "Diluted Spirits—weaker than 35 u.p.," and (in the corner), the figure "40." It was proved that the purchaser saw a corner of the label, but that, from the position which he occupied in the shop, it was impossible for him to see the words printed on it. The view of the Sheriff-Substitute was that, because the purchaser saw a corner of the label, he was put upon his inquiry as to the possible effect of any words which might be inscribed on the body of the label, and therefore as to whether (in answer to his request for ("ordinary" whisky), he was being supplied with something other than that which he asked for. The Sheriff-Substitute in short holds that, in these circumstances, it was the duty of the purchaser to move his position about until he was able to discover whether the corner of the label that he saw was, or was not the corner of the label containing some warning as to the character of what might be in the barrel; and that, since he did not do so, he is disabled from saying that the sale was "to his prejudice" within the meaning of the Act.

It must not be assumed from anything that I say that, supposing the purchaser had seen the words which this label contained, the seller would have been excused from supplying something which was not whisky in response to the purchaser's demand for whisky. But it is, in my opinion, clear that no label, placard, or other form of written or printed notice—whatever its terms—can have any effect at all unless it is proved that the purchaser saw it before the sale, and that it was such as to leave him in no doubt that he was, in point of fact, being supplied with something different from that which (in terms) he asked for. In other words, if the seller of an adulterated article desires to protect himself, it is *ante omnia* necessary for him to prove that he actually acquainted the purchaser with the circumstance that he was not getting what he asked for. He does not discharge himself of that onus by saying that on a barrel, or on a counter, or somewhere in the shop there was a notice which, if seen and read by the purchaser, might possibly have conveyed that information; he must prove that the information was actually conveyed in some form as effectual for practical purposes as by informing the purchaser verbally, in answer to his demand, that the article tendered is not the article demanded, but one which has been adulterated in this way or in that way. All these devices by way of label and the like are just subterfuges—that is the plain truth of the matter; and I am very sceptical as to the possibility of any notice, such as the label in this case, ever affording any protection to a seller.

I think the question put to us should be answered in the negative.

LORD HUNTER.—I agree. The object of the Food and Drugs Act is to ensure that a customer gets the article he asks for. Now if a person goes into a public-house or goes elsewhere and asks for a glass of whisky he is entitled to get a glass of an article which is not less than 35 degrees under proof. If what he gets is 40 under proof, or anything in excess of 35, what he gets is not whisky. That has been decided by a decision interpreting the statute. It is no doubt quite within the power of a person to sell an article that is weaker quality than 35 under proof, but if the request is for whisky and the seller is not proposing to supply the customer with whisky that complies with the definition of whisky, then he is bound to acquaint the purchaser with what he is selling. I do not think in the present case there is anything to suggest that the purchaser received any intimation that what he was getting was not what he asked for. The fact of a notice which was never brought to his attention could not possibly indicate that he knew in this case that the seller was not going to supply him with what he asked for. In this case I think it is clear that offence was committed although it may be that the offence was not a serious or grave one.

LORD SANDS.—I concur. I entirely adopt what your Lordships have said. I have only to add that this is a peculiarly weak case for the publican, because, whatever may be said of the notice on the barrel, it is not, so far as I am aware, the custom for persons who order drinks in a bar to follow with their eyes the shopman and see where he goes to get them from, or from what receptacles he draws them. If a notice on a barrel is sufficient it would be necessary to make that an obligation on the customers, or, at all events, a custom which is not usually followed.

MARGARINE CONTRAVENTIONS.—The following tabular statement shows the number and nature of the contraventions of the Margarine Acts :—

NATURE OF CONTRAVENTIONS.						
Want of statutory labels,	-	-	-	-	-	8
Want of wrappers,	-	-	-	-	-	3
Exhibiting trade advertisement improperly describing margarine,	-	-	-	-	-	1
Total contraventions,	-	-	-	-	-	<u>12</u>

Most of the above contraventions were stated by the vendors to have been due to inadvertance, and it was deemed sufficient to give them verbal cautions. Some manufacturers still persisted in using the clause "mixed with butter" in connection with their margarine, and they were communicated with by the County Clerk.

MISCELLANEOUS ARTICLES.—The only articles that call for comment under this heading are those which contained preservatives. Samples

of frozen and liquid eggs procured from a bakery were certified to contain 1 grain and 43.4 grains of boracic acid respectively. Samples of cream filling and double cream also procured from a bakery were certified to contain a small amount of boracic acid. By the use of the above ingredients in baking, boracic acid is imparted to the cakes. Thus two samples of cake analysed showed on analysis, 2.8 and 7.5 grains of boracic acid per pound of cake. Of ten samples of lunch sausage procured, five were certified free from boracic acid, and five contained amounts ranging from 1.4 to 20 grains per pound of sausage. Two samples of preserved green peas were found to contain .94 and .24 grains of copper respectively per pound of drained peas. A sample of Belfast ham and one of American ham were submitted to analysis, and both were certified to be free from boracic acid. In the absence of standards for preservatives, no action was taken with regard to the above cases.

REPORT OF DEPARTMENTAL COMMITTEE ON PRESERVATIVES.—The final report of the Departmental Committee appointed by the Minister of Health in July, 1923, to inquire into the use of preservatives in food, was presented to the Minister on 30th September, 1924, and has recently been published. A previous committee inquired into and reported on the same subject in 1901. Since that time so much progress has been made in scientific opinion, and in the methods of manufacture and handling of foodstuffs, that many of the recommendations of that committee have now been altered. For instance, the use of boracic acid and salicylic acid, which were permitted in certain foods by the recommendations of the 1901 committee, have now been deemed undesirable as preservatives in food.

PUBLIC HEALTH (CONDENSED MILK) AND (DRIED MILK) REGULATIONS (SCOTLAND), 1923.—Thirteen samples of condensed milk (10 full cream and 3 machine-skimmed), were procured and analysed during the year. All the samples were found to conform to the standards laid down. Two cases of labelling not in accordance with the Regulations were detected, but, as the stocks were old, it was deemed sufficient to give the vendors a caution. Some tins of dried milk, largely used for infants' food, not labelled as required by the Regulations, were detected. The matter was taken up with the manufacturer, who remedied the matter by relabelling the tins.

UN SOUND FOOD.—In the routine duties under the Food and Drugs Act, attention is always given to the condition of other foodstuffs as regards their soundness and fitness for human consumption. In one

shop, a barrel of unsound grapes was inspected by request of the shopkeeper. The grapes were condemned, and the shopkeeper returned them as unfit for human consumption to the merchant from whom they were bought.

SALE OF FOOD ORDER, 1921.—The sections of the above Order which have not been repealed relate to the labelling of imported meat, excepting ham and bacon, and the prohibition of the words “fresh” or “new laid” in connection with the sale of imported eggs. The following contraventions were detected, viz.:—

Imported eggs, not labelled, -	-	-	-	-	1
Imported meat, not labelled, -	-	-	-	-	7

These contraventions were all reported to the County Clerk, who communicated with the offenders giving them a caution.

Fertilisers and Feeding Stuff.

Table C shows the number of samples obtained and the number found deficient.

Four inspections were made, and 9 samples procured, viz., 9 fertilisers (8 formal and 1 informal). In addition, 3 feeding stuffs were received privately.

Of the samples of fertilisers, 8 were taken with the formalities of the Act at the request of the Avondale Farmers' Trading Association. Owing to the uncertainty of the time of arrival of these consignments, it was impossible to give the three days' notice of sampling, and the seven consignors were communicated with, asking their consent to the sampling being carried through in presence of a witness. This was agreed to by all the firms, except one, with whom the time of sampling was arranged by telephone, so that their representative could be present. On analysis by the Agricultural Analyst, all the samples were certified to conform to the guarantees on invoices.

The three samples of feeding stuffs, viz., compound feeding cake, sugar beet and grey pea meal, were received privately from farmers, and were certified satisfactory with the exception of the grey pea meal. The farmer complained that his cows would not eat the meal, and that the merchant from whom he bought it refused to take it back. In the certificate of analysis the Agricultural Analyst makes the following observations:—

“The sample was examined under the microscope, which showed that it was practically all derived from peas. It cannot be regarded as a fair sample of grey pea meal, as the albuminoids are at least 4 per cent. too low. It is evident that it contains a very considerable percentage of offals, such as refuse from split peas or other sources.”

Copies of the Analyst's certificates were sent to the parties from whom the samples were taken.

DEPARTMENTAL COMMITTEE ON FERTILISERS AND FEEDING STUFFS ACT, 1906.—This Committee, which was appointed in July, 1923, issued their report in April, 1924. The report deals with the “remit” in a very comprehensive manner. In a summary of the principal recommendation, the Reporters state:—“We consider the alterations we have thought it right to suggest create so great a change

in the existing law that they cannot be met by merely amending the Act of 1906, but that entirely fresh legislation will be desirable, if it is decided to give effect to our proposals."

The following is a summary of the principal recommendations, viz. :—The duty of administering the Act should be imposed by statute on all County Councils and Burgh Councils, with power to establish joint-committees to carry out the Act. Inspectors to be given power to enter all factories and premises in which fertilisers or feeding stuffs may be manufactured, for the purposes of sampling, and to take samples in course of transit on rail or carrier, and for this purpose the sampling spear is to be approved as a means of taking samples. All parcels of goods are to be marked with the name and address of the consignor and the description of the goods. A registered mark and code sign may be used for this purpose. No samples other than formal and informal taken for the information of the Local Authority to be analysed at public expense. The period allowed for sampling to be extended to 14 days after delivery of the goods or receipt of the invoice, and the requirement that three days' notice of sampling be given to the seller be abolished. The basis of civil and criminal procedure should be clearly separated, the guarantee on the invoice remaining the foundation of civil claims, and the description applied to the goods becoming that of criminal proceedings. An Advisory Committee should be constituted to draw up definitions and schedules of composition and adulteration, and advise from time to time on matters relating to fertilisers and feeding stuffs.

TABLE C.—SHOWING THE NUMBER OF SAMPLES OBTAINED AND NUMBER FOUND DEFICIENT, 1924.

Fertilisers.				Feeding Stuff.			
Name.	Obtained.		Deficient.	Name.	Obtained.		Deficient.
Basic Slag, - -	1		—	Compound Feed-			
Bone Meal, - -	1		—	ing Cake, -	1		—
Grain and Grass				Sugar Beet, -	1		—
Manure, - -	1		—	Grey Pea Meal,	1		1
Superphosphate, -	1		—				
Sulphate of Ammonia,	1		—				
Ground Limestone, -	1		—				
Ground Mineral Phos-							
phate, - -	1		—				
Kainit, - -	1		—				
Potash salts, - -	1		—				
Total,	9		—	Total,	3		1

Shops Acts, 1912 to 1921.

The administration of the Acts was continued in the same manner as in former years, with a view to assisting shopkeepers and their assistants to obtain the benefits conferred on them by the Statute in the way of better working conditions. Legal proceedings against offenders are only instituted as a last resort, where cautions have not been effective in putting a stop to infringements of the terms of the Statute. In the main, offenders are generally smaller shopkeepers and itinerant hawkers. Table D shows the number of inspections to localities, visits to shops, and contraventions detected under the Acts for the three Wards of the County. There were 74 contraventions. These consisted of 28 cases of failure to close at time fixed on weekly half-holidays and under Closing Orders; 1 case of street trading; 2 cases of supplying non-exempted goods; 3 cases of failure to give assistants weekly half-holiday at 1.30 p.m.; and 40 failures to exhibit notices in terms of the Act.

The following notices were issued to shopkeepers:—

Shop Assistants,	...	...	...	...	...	2
Mixed Trades,	...	...	...	...	...	42

The following paragraphs give more particulars regarding the inspections made in connection with the administration of the Acts and the irregularities detected:—

Shops' Weekly Half-Holiday.—The weekly half-holiday Orders operative in the County area apply to (1) the Middle Ward; and (2) the Parish of Carluke. By these Orders, Wednesday is fixed as the day of the weekly half-holiday. In all the other areas of the County the shopkeepers arrange amongst themselves with regard to the day which they will choose for closing their premises in the afternoon, and intimate such arrangement by means of a notice exhibited in their premises.

Fifty-two localities were visited on the days fixed for the weekly half-holiday, and, generally speaking, the closing of shops at 1 p.m. was very well observed.

38 contraventions were detected, consisting of 2 failures to close on weekly half-holiday; 2 cases of sale of non-exempted articles; 1 case of street trading; and 33 cases of failure to exhibit the statutory notices.

Early Closing of Shops in the Evening.—A general Closing Order is in force for all shops in the Parish of Cambuslang, and in Blantyre

Parish a closing order which applies to butchers only, came into force in May of this year. There is also a Closing Order for barbers and hairdressers which applies to the Special Lighting Districts of Aitkenhead and Tannochside, Bellshill and Mossend, Blantyre, Bothwell, Cambuslang, and Uddingston.

Fourteen evening inspections were made in connection with the closing of shops under the Closing Orders and the Early Closing Act. 26 contraventions were detected. Of these, 9 were in connection with the Blantyre Parish Butchers' Order, and the remaining 17 referred to were contraventions of the Cambuslang Closing Order and the Shops (Early Closing) Act. In 14 of the latter it was considered sufficient to caution the offenders. Informations were lodged with the County Clerk in 3 cases, viz., 1 draper, 1 baker, and 1 butcher. Legal proceedings were instituted, and in two of these (baker and butcher) the respondents intimated a plea of guilty. The Sheriff convicted, and imposed fines of £1 and 10s. respectively. In the other case (draper) a plea of not guilty was tendered, and the case came before Sheriff Mercer for proof at Hamilton Sheriff Court on 23rd January, 1925. The defence put forward was that although the shop was open it was not open for the serving of customers. For the prosecution it was submitted that it was unnecessary to prove that an actual sale had taken place, but that the shop was open and no action had been taken by respondent to intimate to the public that it was closed for the purpose of serving customers. The Sheriff in giving a decision of Not Guilty stated that in his view, before a person could be convicted, a sale or an attempted sale after the closing hour must be proved.

Street Trading.—At all inspections in connection with closing of shops on the weekly half-holiday and in the evening, attention is given in regard to street trading. One contravention was detected under this heading. The vendor pleaded ignorance of the requirements of the law, and a verbal caution was given.

As a result of a complaint an inspection was made to a village in the Upper Ward, but nothing was found to substantiate the complaint.

Assistants' Weekly Half-Holiday.—At all inspections special attention was given with a view to ascertaining that the provisions of the Act under this heading were carried out. There were 7 failures to exhibit the statutory notices, stating the days on which the assistants got their half-holidays. Forms of notices were sent to each of these shopkeepers, so that they might comply with the terms of the Statute. Three contraventions were detected, viz. :—(1) two assistants working at 2 p.m. on the day fixed for their half-holiday; (2) a boy

delivering messages on his half-holiday; and (3) a girl found working on the day fixed for half-holiday. In all these cases the employers were cautioned, and subsequent inspections showed that there was no further cause for complaint.

Employment of Young Persons under 18 Years more than 74 Hours per Week.—No contraventions were detected.

Communications.—Many special visits were made as a result of communications received from traders requesting information regarding the provisions of the Act.

Shops Acts.

TABLE D.—SHOWING INSPECTIONS, VISITS TO SHOPS, &c., AND CONTRAVENTIONS IN THE THREE WARDS OF THE COUNTY, 1924.

Inspections and Contraventions.	Upper Ward.	Middle Ward.	Lower Ward.	Total for County.
Inspections to Localities, - -	24	113	20	157
Visits to Shops, &c., - - -	181	1,367	58	1,606
Contraventions—				
Failure to close: Weekly Half-holiday and under Closing Orders, - - - - -	2	26	—	28
Supplying non-exempted goods, -	—	2	—	2
Street Trading, - - - -	—	1	—	1
Failure to give assistants weekly half-holiday at 1.30 p.m., -	—	2	1	3
Failure to give proper intervals for meals, - - - -	—	—	1	1
Failure to provide seats for female assistants, - - - -	—	—	—	—
Employing young persons under 18 years more than 74 hours per week, - - - -	—	1	1	2
Failure to exhibit notices in terms of Act, - - - - -	6	27	7	40
Total Contraventions, -	8	58	8	74

By-Laws Regulating Places of Public Refreshment.

Nine inspections were made in connection with the application of six refreshment vendors for permission to make structural alterations to their premises, so as to allow them to conduct a carrying-out trade after the hours prescribed by the By-laws. Reports dealing fully with each application were sent to the County Clerk.

COUNTY OF LANARK

DISTRICT OF THE UPPER WARD

REPORTS

OF THE

MEDICAL OFFICER OF HEALTH

AND OF THE

SANITARY INSPECTOR

1924

Medical Officer of Health,	-	-	County Offices, Hamilton.
Asst. Medical Officer of Health	}		
Sanitary Inspector.			District Offices, Lanark.

STAFF.

Medical Officer of Health.

J. HUME PATTERSON, F.R.F.P.S.(G.), D.P.H.

Asst. M.O.H. and Tuberculosis Officer.

ALEXANDER FRASER, M.D., D.P.H.

Sanitary Inspector.

WILLIAM PATERSON.

Asst. Sanitary Inspector.

WILLIAM Y. PARK.
(Certificated Meat Inspector.)

Nurse Health Visitors, 3

District Hospital Roadmeetings, Carlisle.

Physician-Superintendent,	-	-	-	Dr. ALEXANDER FRASER.
Consulting Physician,	-	-	-	Dr. ROBERT B. BARR.
Matron,	-	-	-	Miss I. RAMSAY.

Meat Inspector.

JOHN JARVIE, M.R.C.V.S.

Slaughter House Superintendents, 4

COUNTY OF LANARK.

DISTRICT OF THE UPPER WARD.

(AREA, 326,803 ACRES.)

Report by the Medical Officer of Health

FOR THE YEAR 1924.

VITAL STATISTICS.

The **Population**, as estimated for the year 1924, was 48,400. The population of the various parishes is given in Table B.

The number of *inhabited houses*, according to the Valuation Roll, amounts to 10,225, while there are 117 uninhabited houses, the latter being 7 more than in the previous year. The uninhabited houses consist mainly of houses in course of erection.

Statistical Tables.—Table A shows the birth and death-rates per thousand of the population and the infantile deaths per thousand births for the decennial periods 1891-1900, 1901-10, and 1911-20, as well as those for the years 1921-24.

Table B shows the population, births, and deaths for the year in each parish and registration district, with the deaths classified according to cause.

Table C shows the deaths classified according to cause and age periods.

The **Births** registered in the district, after correction for transfers, numbered **1,119**—males, 575; females, 544—giving a birth-rate of **23.1** per 1,000 of the population.

The number of *illegitimate births* registered in the district, after correction for transfers, numbered **70**—males, 37; females, 33—giving an illegitimate birth-rate of **6.2** per 100 births.

The **Deaths** registered in the district, after correction for transfers, amounted to **581**, giving a death-rate of **12** per 1,000 of the population.

The deaths of infants under 1 year numbered **86**, giving an infantile mortality of **76.7** per 1,000 births.

The number of births exceeded the number of deaths by **583**, constituting the *natural increase* of the population.

Infectious Diseases.—The deaths due to notifiable infectious diseases numbered 84, as compared with 80 during the previous year, and were made up as follows:—Diphtheria, 2; scarlet fever, 9; tuberculosis, 33 (pulmonary, 20; meningeal, 7; abdominal, 4; other forms, 2); pneumonia, 40.

The deaths due to non-notifiable diseases numbered 37—whooping-cough, 10; measles, 13; diarrhœa (under 2 years), 14.

Respiratory Diseases.—During the year the deaths, excluding pulmonary tuberculosis, numbered 133, being an increase of 70 compared with the previous year, and were as follows:—Pneumonia, 40; bronchitis, 46; influenza 27; other respiratory diseases, 20. The deaths from bronchitis and from influenza were the highest number recorded during the past five years, the increase, compared with last year's figure, being 27 and 25 respectively. The following statement shows the deaths from respiratory diseases according to months, and shows that the great majority occurred during the months of March and April.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Pneumonia,	- 3	4	9	2	4	4	1	3	1	1	4	4
Bronchitis,	- —	4	7	11	5	5	3	4	—	1	2	4
Influenza, -	- 1	—	9	8	2	—	—	—	1	1	1	4
Other Respiratory Diseases,	- 2	—	5	3	—	3	2	—	—	3	2	—
Total, -	- 6	8	28	24	11	12	6	7	2	6	9	12

The age periods of these deaths are to be found in Table C.

TABLE B.—UPPER WARD.—Year 1924.—Population, Births, and Deaths in each Registration District, with Deaths classified according to cause.

[illegible]

TABLE C.—UPPER WARD.—Year 1924.—Deaths classified according to Cause and Age Periods.

CAUSE OF DEATH.	Registered in District.	Transferred from other Districts.	Transferred to other Districts.	Nett Deaths.	NETT DEATHS AT DIFFERENT AGE PERIODS.																		
					Weeks.				Months.				Years.										
					1	1-2	2-3	3-4	1-3	3-6	6-9	9-12	1	5	10	15	25	35	45	55	65	75	
Enteric Fever, . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	5	10	15	25	35	45	55	65	75
Measles,	13	...	...	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever,	6	4	1	9	...	...	...	...	...	...	1	2	9	1	...	...	...	...	...	...	...	...	...
Whooping-Cough,	10	...	...	10	...	...	...	...	...	...	...	...	4	2	1	1	...	1	...	...	...	...	...
Diphtheria,	3	...	1	2	...	...	...	...	2	...	1	1	6	...	...	...	...	...	...	...	...	...	...
Influenza,	27	...	...	27	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
Erysipelas, . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	4	1	...	...	...	5	5	4	3	4	...
Other Septic Diseases,	5	3	...	8	...	...	...	...	...	...	...	...	2	1	1	...	2	...	2	...	...	...	...
Cerebro-Spinal Fever, . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis,	26	2	8	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningeal "	6	1	...	7	...	...	...	...	...	...	...	...	...	...	1	5	6	2	5	...	...	...	...
Abdominal "	3	2	1	4	...	...	...	...	...	1	...	...	4	...	...	...	...	...	...	...	...	...	...
Other Forms, " . . . . .	...	2	...	2	...	...	...	...	...	...	...	2	1	...	1	...	1	...	...	...	...	...	...
Malignant Diseases,	39	8	4	43	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Rheumatic Fever,	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...
Meningitis (simple),	4	3	...	7	...	...	...	...	...	...	...	...	...	...	...	...	3	5	15	13	7	...	...
Cerebral Hemorrhage,	40	3	3	40	...	...	...	...	1	...	1	...	2	...	1	...	...	...	1	...	1	...	...
Convulsions,	10	...	...	10	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...
Other Nervous Diseases,	12	3	...	15	1	...	...	...	1	2	...	...	4	2	...	...	...	3	9	15	13	...	...
Organic Heart Disease,	55	...	6	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis,	47	...	1	46	...	...	...	...	...	...	...	...	...	1	...	4	1	...	1	8	17	17	...
Pneumonia,	36	4	...	40	...	...	...	...	3	3	1	1	...	1	...	1	...	2	6	15	12	...	...
Laryngitis,	1	...	...	1	...	...	...	...	2	1	2	5	6	2	...	2	2	3	1	4	7	3	...
Other Respiratory Diseases,	19	2	1	20	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Diarrhea (under 2 years),	14	...	...	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis and Typhlitis, . . . . .	...	7	...	7	...	...	...	...	4	4	3	...	3	...	...	...	...	3	4	2	9	...	...
All Liver Diseases (normal), . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases,	3	8	...	11	...	...	...	...	...	...	...	...	...	1	1	1	2	...	...	1	...	...	...
Nephritis and Bright's Disease,	7	3	1	9	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Sepsis, . . . . .	...	3	...	3	...	...	...	...	...	...	...	...	...	...	1	...	1	...	3	3	...	...	...
Dis. and Acc. of Pregnancy,	4	1	...	5	...	...	...	...	...	...	...	...	...	...	...	2	1	1	1	3	...	...	...
Congenital Malformation,	4	1	...	5	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...
Premature Birth,	7	...	...	7	...	...	...	...	1	1	...	...	...	...	...	1	3	1	...	...	...	...	...
Atrophy, Debility, &c.,	16	3	...	19	4	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Atelectasis, . . . . .	...	...	...	...	9	...	1	1	5	1	2	...	...	...	...	...	...	...	...	...	...	...	...
Injury at Birth,	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation—Overlying, . . . . .	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis, . . . . .	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rickets,	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence,	14	8	1	21	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Suicide,	4	1	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Defined Diseases,	86	15	4	97	3	...	1	...	1	1	...	...	3	1	1	2	4	5	2	2	...	1	...
Ill-Defined Diseases, . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total,	525	88	32	581	20	2	2	1	21	15	13	12	59	18	12	28	27	29	43	76	99	104	...

The undernoted statistics show the deaths and death-rates per thousand of the population for the past five years:—

Year.	Pneumonia.		Bronchitis.		Influenza.		Other Respiratory Diseases.	
	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.
1920	- 34	·75	22	·48	5	·11	13	·28
1921	- 33	·71	27	·58	4	·09	10	·21
1922	- 54	1·15	30	·64	20	·43	19	·41
1923	- 28	·58	19	·39	2	·04	14	·29
1924	- 40	·82	46	·95	27	·55	20	·41

Malignant Diseases.—The deaths falling under this heading numbered 43—males, 17; females, 26—thus showing a slight decrease in the deaths from malignant disease when compared with the figure of 54 for the previous year. The age periods at death will be found in Table C.

The type of disease according to certified cause of death was—Carcinoma or cancer, 35; sarcoma, 1; epithelioma, 2; others, 5. The location of the disease was as follows: some portion of the gastrointestinal tract, 17 cases; the genito-urinary tract, 10; liver, 4; breast, 3; larynx, 2; tongue, 1; spine, 1; foot, 1; pharynx, 1; hard palate, 1; glands, 1; thyroid, 1.

TABLE A.—BIRTH-RATES AND DEATH-RATES PER 1,000 OF THE POPULATION. INFANTILE DEATHS PER 1,000 BIRTHS.

Year.	Births.	Birth-rate.	Net Deaths.	Death-rate.	Infants under 1 year.	
					Deaths.	Death-rate.
Average. 1891 to 1900	1,222	31·6	606	15·6	116	95·5
Average. 1901 to 1910	1,209	28·9	552	13·2	104	86·5
Average. 1911 to 1920	1,143	25·9	561	12·73	91	80·23
1921	1,225	26·23	541	11·58	76	62·04
1922	1,097	23·40	584	12·45	101	92·06
1923	1,144	23·9	512	10·7	74	64·6
1924	1,119	23·1	581	12·0	86	76·7

PREVALENCE OF INFECTIOUS DISEASE.

The diseases included under this heading are classified in relation to notification, and are divided into two groups. Group I includes diseases which are compulsory notifiable (*a*) under the Notification Act, (*b*) by adoption under the Notification Act, and (*c*) by order of the Scottish Board of Health, and Group II not compulsorily notifiable diseases. The diseases included in these groups are as follows:—

GROUP I.

(<i>a</i>)	(<i>b</i>)	(<i>c</i>)
	August, 1906.	1st August, 1912.
Smallpox	Cerebo-spinal Menin-	Pulmonary Tuberculosis
Diphtheria	gitis	1st July, 1914.
Scarlet Fever	24th October, 1912.	All forms of Tuberculosis
Typhus Fever	Ophthalmia Neonatorum	1st August, 1919.
Enteric Fever	Acute Poliomyelitis	Malaria
Puerperal Fever	Tetanus	Dysentery
Erysipelas	Anthrax	Trench Fever
	Glanders	Acute Primary Pneumonia
	Actinomycosis	Acute Influenzal do.

GROUP II.

*Measles	Chickenpox	Ringworm
German Measles	Mumps	Scabies
*Whooping Cough		Encephalitis Lethargica

* Primary cases of those diseases under five years of age have been made notifiable under the Maternity and Child Welfare Scheme.

There was a slight increase in the prevalence of notifiable infectious disease as compared with the previous year. As usual, the two most prevalent diseases were scarlet fever and diphtheria. The total number of cases of both scarlet fever and diphtheria showed a definite increase, there being 425 and 68 cases respectively, while last year's figures were 265 and 46. The total number of cases of infectious disease notified during the year was 610, in comparison with last year's figure of 527. Table D shows the number of cases of notifiable infectious disease occurring in each parish, and in the following paragraphs the prevalence and distribution of each disease is summarised.

All outbreaks were carefully inquired into, and the usual recognised methods of investigation, isolation, and disinfection were

carried out to control the spread of the disease. Where the patient was in any way connected with a dairy farm, special precautions were taken to discover the source of infection, and in all cases prompt removal to hospital was obtained. In the case of diphtheria, throat swabs were taken for bacteriological examination from all members of the household.

TABLE D.—Number of Cases of Infectious Sickness recognised in each Parish during 1924.

PARISH	Scarlet Fever.	Diphtheria.	Enteric Fever.	Puerperal Fever.	Encephalitis Lethargica.	Erysipelas.	Ophthalmia Neonatorum.	Acute Primary Pneumonia.	Influenzal Pneumonia.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.
Biggar, -	1	—	—	—	—	1	—	—	—	—	—
Carluke, -	51	5	—	1	—	6	—	15	—	7	13
Carmichael, -	54	1	—	1	—	—	—	1	—	4	1
Carnwath, -	55	6	—	—	—	—	—	—	—	2	6
Carstairs, -	—	13	—	—	—	—	1	3	—	1	2
Covington, -	—	—	—	—	1	—	—	—	—	—	—
Crawford, -	—	1	—	—	—	1	—	—	—	4	2
Crawfordjohn, -	—	—	—	—	—	—	—	—	—	—	—
Coulter, -	—	—	—	—	—	—	—	—	—	—	—
Dolphinton, -	—	—	—	—	—	—	—	—	—	—	—
Douglas, -	121	3	—	1	—	1	2	—	—	2	—
Dunsyre, -	1	1	—	—	—	—	—	—	—	—	—
Lamington, -	—	—	—	—	—	—	—	—	—	2	—
Lanark, -	9	6	—	—	—	5	—	9	—	8	7
Lesmahagow, -	121	32	1	—	1	11	—	45	6	12	10
Libberton, -	3	—	—	—	—	1	—	—	—	—	1
Pettinain, -	—	—	—	—	—	—	—	1	—	—	—
Symington, -	8	—	—	—	—	—	—	1	1	—	—
Walston, -	1	—	—	—	—	—	—	—	—	—	1
Wiston, -	—	—	—	—	—	—	—	—	—	—	—
Totals, -	425	68	1*	3	2	26	3	75	7	42	43

* Diagnosis Revised.

Smallpox.

No case occurred during the year, the last case notified being in the year 1904.

Vaccination (Scotland) Act, 1907.—The returns received from the Registrars showing the number of statutory declarations of conscientious objection to vaccination are tabulated here according to registration district for the years 1920 to 1924. Figures for previous years will be found in the Summary Report, 1914-19.

	1920.	1921.	1922.	1923.	1924.
Biggar, - - -	1	8	4	1	1
Carluke, - - -	94	99	110	103	95
Carmichael, - - -	17	21	19	21	14
Carnwath, - - -	12	11	19	8	13
Forth, - - -	27	22	25	29	46
Haywood, - - -	15	15	18	32	18
Carstairs, - - -	9	4	3	15	10
Covington, - - -	—	1	1	—	1
Crawford, - - -	—	4	5	3	1
Leadhills, - - -	2	2	3	7	1
Crawfordjohn, - -	1	3	5	4	2
Coulter, - - -	—	1	—	—	1
Dolphinton, - - -	—	—	1	—	—
Douglas, - - -	25	24	33	23	26
Dunsyre, - - -	—	—	—	—	—
Lamington, - - -	—	1	1	—	2
Lanark, - - -	39	28	30	6	11
Lesmahagow, - - -	110	113	7	59	91
Kirkfieldbank, - -	7	7	92	4	6
Coalburn, - - -	—	22	36	24	32
Libberton, - - -	—	—	—	2	2
Pettinain, - - -	—	—	—	—	1
Symington, - - -	1	—	4	1	1
Walston, - - -	—	—	—	3	1
Wiston, - - -	—	—	—	1	1
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	360	387	416	346	377
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The proportion of declarations for the whole district was 33·5 per cent. of the total births.

Diphtheria.

The following tabular statement shows the prevalence of this disease since 1892, as well as the number of deaths, and the respective rates :—

Year.	Cases.	Deaths.	Deaths per 100 Cases.	Cases per 1000 Population.	Deaths per 10,000 Population.
Average.					
1892-95,	- 78	14	17·9	2·0	3·7
Average.					
1896-1900,	- 89	6	6·7	2·2	1·4
Average.					
1901-05,	- 66	7	10·6	1·6	1·6
Average.					
1906-10,	- 156	7	4·4	3·6	1·7
Average.					
1911-15,	- 95	8	8·4	2·1	1·8
Average.					
1916-20,	- 82	7	8·5	1·8	1·5
1921, -	- 89	4	4·4	1·9	0·9
1922, -	- 72	7	9·7	1·5	1·5
1923, -	- 46	4	8·7	0·9	0·8
1924, -	- 68	2	2·9	1·4	0·4

The number of deaths from the disease amounted to 2, in comparison with last year's figure of 4, while the total number of cases showed an increase of 22, in comparison with the number of cases notified in the year 1923.

Of the 68 cases notified, 54 or 79·4 per cent. were removed to hospital. The monthly distribution of cases throughout the year was as follows :—

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
4	9	9	6	3	1	2	7	1	9	9	8

It will be seen that the prevalence of the disease was greatest during the first and last quarters of the year.

The age incidence of the cases and deaths was as follows :—

	Ages,	-1	1-5	5-10	10-15	15-25	25-55
Cases,		1	10	24	16	13	4
Deaths,		1	1	—	—	—	—

Table D shows the number of cases occurring in each parish, from which it will be seen the greatest number of cases of diphtheria were notified in the Parish of Lesmahagow, 32 cases being notified.

These cases were distributed as follows:—Kirkfieldbank, 11; Crossford, 10; Coalburn, 4; Lesmahagow, 4; Turfholm, 2; and Dillarburn, 1—total, 32.

Dairy Farms.—The disease occurred at dairy farms in two instances. The cases were removed promptly to hospital, and after examination of the various inmates the milk supply was allowed to continue.

Diphtheria Antitoxin.—Of the 45 cases of diphtheria admitted to Lanark Burgh Hospital during the year, only 2 cases had serum prior to admission. Two deaths occurred in hospital within 24 hours of admission. Neither of these cases received serum prior to admission.

Scarlet Fever.

The following tabular statement shows the prevalence of this disease since 1892, as well as the number of deaths, and the respective rates:—

Year.	Cases.	Deaths.	Deaths per 100 Cases.	Cases per 1000 Population.	Deaths per 10,000 Population.
Average.					
1892-95,	- 299	7	2·3	7·88	1·77
Average.					
1896-1900,	- 326	9	2·7	8·27	2·28
Average.					
1901-05,	- 187	4	2·1	4·56	0·97
Average.					
1906-10,	- 235	3	1·2	5·5	0·70
Average.					
1911-15,	- 264	5	1·9	6·03	1·14
Average.					
1916-20,	- 156	2	1·5	3·4	0·5
1921, -	- 263	1	0·3	5·6	0·2
1922, -	- 403	11	2·7	8·6	2·3
1923, -	- 265	3	1·1	5·5	0·6
1924, -	- 425	9	2·1	8·7	1·8

The monthly distribution of the cases was as follows:—

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
41	26	34	38	31	30	17	31	51	41	49	36

From these figures it will be seen that the disease was most prevalent during the first and last quarters of the year. There has been a definite increase during the year of the cases notified—425 in comparison with 265 cases during the previous year. Of the 425 cases notified, 338 or 79·5 per cent. were removed to hospital.

The age incidence of the cases and deaths was as follows :—

Ages,	-1	1-5	5-10	10-15	15-25	25-45	45-65
Cases,	8	100	173	81	46	16	1
Deaths,	—	4	2	1	1	1	—

Table D shows the number of cases occurring in each parish, and it will be noted that the disease was prevalent in the more populous areas.

The greatest number of cases occurred in the Parishes of Douglas and Lesmahagow, and were distributed as follows :—

Parish of Douglas.—Towards the end of the year the disease became more prevalent in this parish, following upon an epidemic which had prevailed in Muirkirk and Glenbuck, in the adjoining county. Douglas, 93; Douglas West, 18; Glespin, 4; Rigside, 4; Happendon, 2—total, 121.

Parish of Lesmahagow.—Coalburn, 64; Lesmahagow, 22; Kirkfieldbank, 17; Kirkmuirhill, 5; Auchenheath, 3; Turfholm, 3; Crossford, 3; Blackwood, 2; Lintfieldbank, 2—total, 121.

The type of the disease on the whole was mild.

Dairy Farms.—In 10 instances the disease occurred at a dairy farm. Immediate removal of the cases to hospital was obtained in nine instances, and after the usual medical examination of the inmates and disinfection of the premises the milk supply was continued. In one instance the case was isolated at home, but the milk supply was voluntarily stopped, the milk being used for the purpose of feeding young cattle.

Enteric Fever.

The following tabular statement shows the prevalence of this disease since 1892, as well as the number of deaths, and the respective rates.

This table shows that during the period of County administration the disease has practically disappeared. In 1921 there was one case notified; in 1922 there were no cases recognised at all; and in the year now reported on only one case was notified, the diagnosis of which was revised after admission to hospital.

Year.	Cases.	Deaths.	Deaths per 100 Cases.	Cases per 1000 Population.	Deaths per 10,000 Population.
Average. 1892-95,	- 46	6	12·4	1·2	1·5
Average. 1896-1900,	- 27	5	17·6	0·6	1·2
Average. 1901-05,	- 20	4	18·8	0·4	0·9
Average. 1906-10,	- 13	2	17·4	0·3	0·5
Average. 1911-15,	- 6	1	23·3	0·13	0·3
Average. 1916-20,	- 3	0·2	5·9	0·01	0·02
1921, -	- 1	—	—	·02	—
1922, -	- —	—	—	—	—
1923, -	- 3	1	16·6	·06	·02
1924, -	- *1	—	—	·02	—

* Diagnosis revised.

This case occurred in the Parish of Lesmahagow. The patient had complained for about a fortnight, and had suffered from pyrexia and diarrhœa. Was admitted to County Hospital in Motherwell in a typhoid state, and died four days after admission. The cause of death was malignant endocarditis, followed by purpuric corruption. On *post-mortem* examination hæmorrhages were found in every organ of the body. The brain was extensively involved with many large hæmorrhages on the surface. The spleen and left kidney, in addition, had infarctions. The mitral valve had recent vegetations on its surface.

Cerebro-Spinal Fever.

No cases of this disease were notified during the year.

Erysipelas.

26 cases were notified during the year, and no deaths from the disease were registered. None of the cases was removed to hospital.

Pneumonia.

The notifications of acute primary pneumonia numbered 75, while 7 cases of influenzal pneumonia were notified. Compared with the previous year there is an increase of 25 in the total number of cases of pneumonia notified. 1 case of pneumonia was removed to hospital. The death-rate and the number of deaths occurring from the disease will be found under the heading "Respiratory Diseases."

Dysentery.

No cases of this disease were notified during the year.

Puerperal Fever.

3 cases were notified in the following parishes:—Carluke, 1; Carmichael, 1; Douglas, 1. All cases were removed to the County Hospital, Motherwell. Further particulars regarding these cases will be found under Maternity and Child Welfare.

Non-Notifiable Diseases.

The sources of information available to the department regarding the prevalence of measles, whooping-cough, mumps, chickenpox, &c., are as follows:—(1) Information sent by headmasters for the purpose of certification of scholars absent on account of infectious disease; (2) application made by school authorities for closure of schools when the attendance is interfered with by epidemic prevalence; (3) information obtained by the Nurse Health Visitors in the course of their duties; and (4) the returns of deaths received from the local registrars.

Measles.—At the beginning of the year the Nurse Health Visitors reported to the department the appearance of measles in the district. This occurred about the second week in January, the first cases being reported in the Symington area, where infection seems to have been introduced from Glasgow. The disease spread rapidly in the district, and assumed an epidemic form. The more populous parts of the district as usual were mostly affected. The epidemic reached its height during the latter part of March, the greatest number of cases reported in one week being 185 in the fourth week of that month. The epidemic quickly subsided, but there was a slight recrudescence of the disease in the autumn. In all 850 cases came to the knowledge of the department, of which 706 were visited by the whole-time Nurse Health Visitors, who did excellent work in this respect. The cases reported, classified according to registration district, are as follows:—Carstairs, 33; Carmichael, 47; Carluke, 208; Crawford, 5; Coulter, 1; Douglas, 182; Lanark, 4; Lesmahagow, 211; Coalburn, 7; Kirkfieldbank, 17; Symington, 20; Haywood, 45; Forth, 58; Lamington, 13; Libberton, 1—total, 850.

According to age groups the cases are classified thus:—

-1	1-3	3-5	5-10	10 and over	Total.
25	83	111	555	76	850

This figure is, of course, only approximate, as in this disease and in whooping-cough the medical attendant may only be called upon if the child becomes seriously ill; thus many cases are not heard of, more especially in the more isolated areas. The greatest number reported occurred between the ages of 5 years and 10 years, and were obtained both from schools and from the visits of the nurses to younger members of families. Roughly 74 per cent. of the cases were of 5 years and over, while 26 per cent. were below 5 years of age.

Owing to the increased prevalence, the number of deaths was greater than has occurred during the past few years. 13 deaths were registered during the year, these occurring in the various registration districts as follows:—Carlisle, 5; Carnwath, 2; Douglas, 2; Forth, 1; Haywood, 1; Lesmahagow, 1; Symington, 1—total, 13. Respiratory complications were the ultimate cause of death in 11 cases, as follows:—Pneumonia, 7; bronchitis, 3; laryngismus stridulus, 1; while in 2 cases the certified cause of death was measles solely.

According to age periods the deaths were as follows:—

-1	1-3	3-5	5-10	Total.
3	7	2	1	13

Whooping-Cough.—Special efforts were also directed towards obtaining some idea of the prevalence of this disease, and altogether 202 cases were reported. Of these cases, 142 were visited by the Nurse Health Visitors. The disease appeared to be most prevalent in the second and fourth quarters of the year, when 81 and 85 cases respectively were reported. The cases occurred in the several registration districts as follows:—Carlisle, 69; Carstairs, 29; Carnwath, 1; Carmichael, 5; Douglas, 24; Lesmahagow, 27; Coalburn, 39; Walston, 8—total, 202.

10 deaths were registered, 8 of these being during the second quarter of the year, and according to age periods were as follows:—

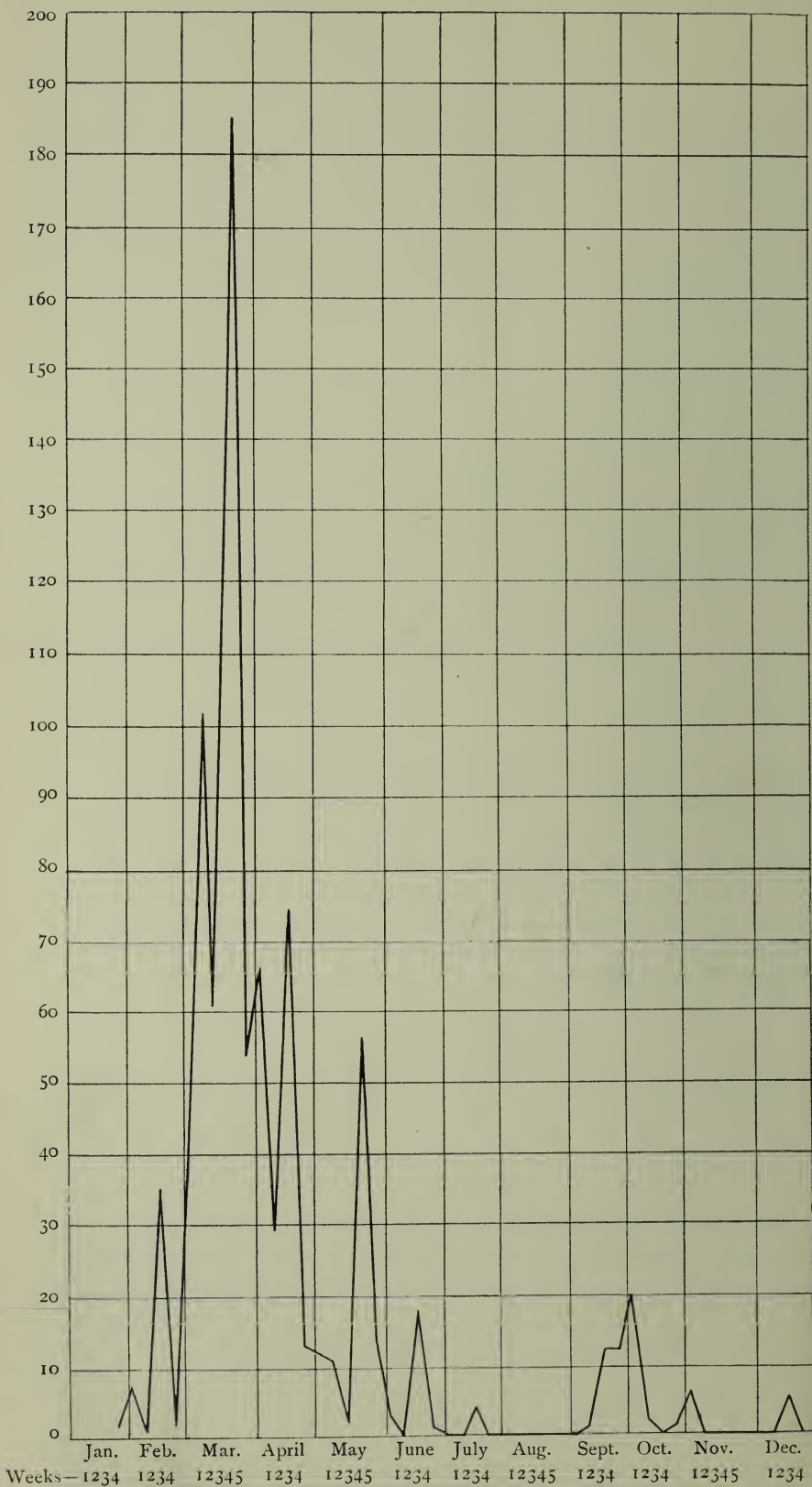
-1	1-3	3-5	5-10	Total.
4	5	1	—	10

Complications occurred in these deaths as follows:—Bronchitis, 3; pneumonia, 4; croup, 1; gastric catarrh, 1. The deaths took place in the registration districts of—Carlisle, 7; Douglas, 1; Coalburn, 1; Lesmahagow, 1.

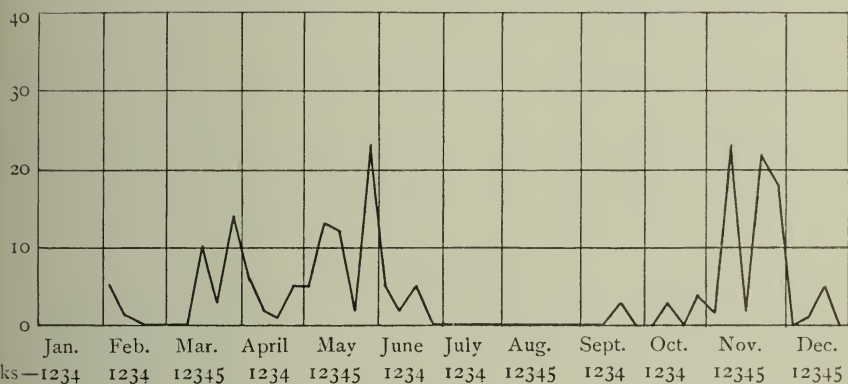


MEASLES.

1924.



WHOOPING COUGH.
1924.



The following tabulated statement shows the death-rate per 10,000 of the population and actual number of deaths during the past four years :—

Year.	Measles.		Whooping-Cough.	
	Deaths.	Death-rate per 10,000.	Deaths.	Death-rate per 10,000.
1921	—	—	17	3·6
1922	8	1·7	10	2·1
1923	4	·8	12	2·5
1924	13	2·6	10	2·0

Under the Maternity and Child Welfare Scheme primary cases of measles and whooping-cough in children under 5 years have now been made notifiable.

Two charts are incorporated in the report showing the weekly prevalence of measles and whooping-cough.

Hospital accommodation for Measles and Whooping-Cough.—Arrangements were made whereby severe cases or cases where the home conditions were not satisfactory could be admitted to the County Hospital, Motherwell, but if the proposed isolation hospital at Roadmeetings were provided the small wards would be very suitable for the treatment of cases of measles and whooping-cough which cannot be properly nursed at home.

School Closure.

Owing to the prevalence of infectious disease in certain areas it was found necessary to make several visits to schools for the purpose of examining the scholars with a view to detecting unrecognised cases. The schools visited were as follows:—Tarbrax, Carmichael, Douglas Water, Symington, Douglas West, Douglas, Carluke Junior, Carluke Higher Grade, Law, Stablestone, Wiston, Carstairs Village, Carstairs Junction, Haywood, and Forth. During the year it was found necessary to close the following schools on account of measles :—

School.	Disease Prevalent.	Period of Closure.
Douglas West, - - - -	Measles,	6th March-21st March, 1924
Douglas (Infants I., II., & Junior II.)	„	14th March-28th March, 1924
Stablestone, - - - -	„	31st March-11th April, 1924
Wiston, - - - -	„	21st April-2nd May, 1924
Haywood (Infants only), - -	„	22nd May-6th June, 1924
Forth (Infants only), - - -	„	22nd Sept.-3rd Oct., 1924

The usual certificates of closure were granted by the Local Authority in each case.

Anthrax.

9 outbreaks of this disease in cattle were reported during the year. No cases of suspicious illness occurred amongst the persons in contact with the diseased animals.

Venereal Diseases.

During the year, from the Upper Ward District, 15 cases received treatment—males, 9; females, 6. Of these, 12 received outdoor treatment and 3 indoor treatment, while the total attendances numbered 191. 14 specimens were examined for Wassermann reaction, and 5 other bacteriological examinations were made.

Hospitals.

The cases of infectious disease occurring in the Upper Ward are treated in the Burgh Fever Hospital, Lanark, and in the County Hospital, Motherwell.

During the year scarlet fever and diphtheria were more prevalent than in the previous year, and there was again difficulty in obtaining hospital accommodation for cases of scarlet fever on various occasions. As immediate removal of the cases was not always obtained, this accounted for many of the secondary cases.

The admissions during the year were as follows :—

	County Hospital, Motherwell.	Burgh Hospital, Lanark.	Totals.
Enteric Fever, - - -	*1	—	1
Scarlet Fever, - - -	125	213	338
Diphtheria, - - -	9	45	54
Puerperal Fever, - -	3	—	3
Ophthalmia Neonatorum, -	1	—	1
Acute Primary Pneumonia, -	1	—	1
	<hr/>	<hr/>	<hr/>
	140	258	398
	<hr/>	<hr/>	<hr/>

* Diagnosis revised.

Owing to the proposed formation of a Joint Sanatorium Board for the three District Committees and the Burghs in the County of Lanark, the provision of the additional hospital accommodation, referred to in last year's report, has been delayed meanwhile. If a Joint Sanatorium Board were formed, the proposed scheme to combine the present district sanatorium and the proposed infectious disease hospital would not be suitable, as they would be under the control of two separate authorities.

Tuberculosis.

The Burghs of Lanark and Biggar being included in the Upper Ward District Tuberculosis Scheme, statistics relating to the three areas are given separately.

Upper Ward.—The following tabular statement shows a marked decline in the deaths and death-rate from tuberculosis:—

Annual Average—	PULMONARY.			NON-PULMONARY.		
	Cases Notified.	Deaths Registered.	Death-rate per 10,000 Population.	Cases Notified.	Deaths Registered.	Death-rate per 10,000 Population.
1891-95, - —	—	45	12·0	—	23	6·2
1896-1900, - —	—	47	11·9	—	17	4·4
1901-05, - —	—	43	10·5	—	20	4·9
1906-10, - 36	36	35	8·1	—	15	4·4
1911-15, - 50	50	32	7·0	—	13	2·8
1916-20, - 43	43	28	6·3	25	15	3·3
1921, - - 33	33	20	4·3	32	15	3·2
1922, - - 48	48	21	4·5	32	17	3·6
1923, - - 51	51	33	6·9	30	11	2·3
1924, - - 42	42	20	4·1	42	13	2·6

Mortality.—The deaths from all forms of tuberculosis numbered 33, and were classified as follows:—Pulmonary, 20; meningeal, 7; abdominal, 4; other forms, 2. The deaths will be found classified according to parish in Table B.

The death-rate for all forms of the disease was ·68 per 1,000 of the population. The death-rate of the various forms of the disease, and also the age incidence of the deaths, will be found in Table C.

Deaths in Relation to Notification.—There are still a number of cases in which medical practitioners fail to carry out their legal duties and notify punctually when the case becomes known. Some cases are not notified until death is approaching, and in others the case only becomes known when the local registrar's return of deaths is received.

Of the 33 net deaths from tuberculosis, 20 were of the pulmonary form. Of these, 16 were notified (2 at death), leaving 4 not notified. Of the total net deaths, 6 occurred in institutions.

The period elapsing between notification and death was:—Under 1 month, 5 cases; 1-3 months, 3; 3-6 months, 1; 6-9 months, 1; 9-12 months, 0; 1-2 years, 1; over 2 years, 5.

Of the 33 net deaths from tuberculosis, 13 were of the non-pulmonary form. Of these, 8 were notified (6 at death), leaving 5 not notified. Of the total net deaths, 8 occurred in institutions.

The period elapsing between notification and death was:—Under 1 month, 7 cases; 1-3 months, 1; 3 months and over, 0.

Notifications.—The number of cases notified amounted to 85—pulmonary, 42; non-pulmonary, 43. Of the non-pulmonary form 1 had been previously notified, leaving a total of 84 new cases notified. Of the 42 new pulmonary cases, 11 died, 2 left the district, thus leaving 29 on record at the end of the year. Of the 42 non-pulmonary cases, 7 died, 1 left the district, and in 1 case the diagnosis was revised, thus leaving 33 cases on record.

It may be noted that almost 17 per cent. of the total notifications were cases who had come to the district within twelve months.

The age incidence of the cases notified was as follows:—

Ages	-1	1-5	5-15	15-25	25-45	45-65	65 and over.	Total.
Pulmonary,	—	3	9	9	14	7	—	42
Meningeal,	1	3	—	—	1	—	—	5
Abdominal,	—	5	3	4	—	1	—	13
Other Forms,	—	2	7	4	10	1	1	25
Total, -	1	13	19	17	25	9	1	85

The occupations of the cases notified were classified thus:—Housewives, 14; scholars, 22; miners, 8; domestic servants, 1; shop workers, 1; farm workers, 2; engineers, 1; school teachers, 2; dress-makers, 3; typists, 2; railwaymen, 2; navvy, 1; joiners, 2; shoe-makers, 1; hawkers, 1; no occupation or none stated, 22.

Duration of Illness.—The duration of illness of the new cases notified during the year, according to patient's own estimate at the time of notification, was as follows:—

Months,	-1	1-2	2-3	3-6	6-9	9-12	12-18	18-24	Over 2 years.	Total
Pulmonary,	7	10	4	6	6	1	3	—	5	42
Non-Pulmonary,	8	8	1	4	5	3	2	2	9	42

Total Cases on Record.—The total cases on record, as shown in the following statement, amounted to 176—pulmonary, 99; and non-pulmonary, 77.

Changes during 1924.

	Cases in District 1-1-24	New Cases.	Total on Record.	Left District.	Died.	Off List.*	Cases in District 31-12-24.
Pulmonary, -	77	42	119	3	16	1	99
Non-Pulmonary,	45	42	87	1	8	1	77

*Disease arrested or diagnosis revised.

The cases receiving *domiciliary treatment* numbered 17.

The cases receiving *institutional treatment* are dealt with under the heading "Sanatoria."

Burgh of Lanark.—During the year there were 6 *deaths* from tuberculosis—pulmonary, 3; meningial, 2, abdominal, 1.

The *notifications* received numbered 14. The notifications, according to the form of the disease, were as follows:—Pulmonary, 9; non-pulmonary, 5. Of the non-pulmonary form, 1 case had been previously notified, thus leaving a total of 13 cases notified.

The *occupations* of the cases notified were classified thus:—Scholars, 3; housewives, 2; factory workers, 3; lorryman, 1; and none stated, 5.

The *age incidence* of the cases notified was as follows:—

	1-5	5-15	15-25	25-45	45-65	65 and over.	Total.
Pulmonary, -	1	1	2	4	1	—	9
Non-Pulmonary,	1	2	1	—	1	—	5

Institutional Treatment.—10 cases—7 pulmonary and 3 non-pulmonary—received treatment in the District Sanatorium, Road-meetings.

Domiciliary Treatment.—2 cases received treatment.

Burgh of Biggar.—During the year 2 *deaths* were registered from tuberculosis—pulmonary, 1; and abdominal, 1.

4 cases were *notified* during the year—pulmonary, 2; non-pulmonary, 2.

The *age incidence* of the cases notified was as follows:—

	1-5	5-15	15-25	24-45	45-65	65 and over.	Total.
Pulmonary,	—	—	—	1	1	—	2
Non-Pulmonary,	1	—	1	—	—	—	2

Institutional Treatment.—1 pulmonary case received treatment during the year.

Domiciliary Treatment.—1 case received treatment.

SANATORIA.

District Sanatorium, Roadmeetings.

The District Hospital at Roadmeetings is reserved for the treatment of tuberculosis. During the year 51 cases were admitted—41 from the Upper Ward; 9 from the Burgh of Lanark; and 1 from the Burgh of Biggar.

Patients Treated.—7 pulmonary and 4 non-pulmonary cases were in residence at the beginning of the year, and during the course of the year 37 pulmonary and 14 non-pulmonary cases were admitted, making the total number of patients under treatment during the year 62.

During the year 23 pulmonary and 13 non-pulmonary cases were discharged, and 6 pulmonary cases and 1 non-pulmonary case died, leaving 15 pulmonary and 4 non-pulmonary cases under treatment at the close of the year.

In 1 pulmonary and 1 non-pulmonary case discharged the diagnosis was revised, these cases being found to be non-tuberculous.

Place of Residence.—The parishes of residence of the cases discharged were as follows:—Carnwath, 5; Carluke, 8; Lesmahagow, 7; Lanark, 3; Crawford, 3; Carmichael, 2; Carstairs, 1; Burgh of Lanark, 6; and Burgh of Biggar, 1.

Age and Sex.—The cases discharged are shown in the following table, classified according to age and sex, and according to age groups for both sexes. In each age group the number of pulmonary, non-pulmonary, and non-tuberculosis cases are shown.

Age Periods.	Males.	Females.	Both Sexes.	Age Groups.	Pulmonary.	Non-Pulmonary.	Non-Tuber.	Total
-5	2	3	5	Pre-school age.	2	2	1	5
-10	2	2	4	School age.	4	5	—	9
-15	5	—	5					
-20	1	—	1	Adolescence.	10	1	—	11
-25	4	1	5					
-30	3	2	5					
-35	1	—	1	Early Maturity.	3	2	1	6
-40	1	—	1					
-45	1	3	4					
-50	1	—	1	Late Maturity.	3	2	—	5
-55	—	2	2					
-60	1	1	2					
22	14	36			22	12	2	36

Pulmonary Cases Discharged.

Duration of Illness.—The duration of illness on admission, stated in monthly periods, was as follows:—

Months,	1-3	3-6	6-12	12-18	18-24	Over 24	Total.
	3	1	3	2	5	9	23

Earliest Manifestations.—From the histories of illness, taken on admission, the earliest signs or symptoms indicative of a departure from normal health were:—Cough, 12; pleurisy, 2; influenza, 3; bronchitis, 2; pneumonia, 1; loss of weight, 2; hæmoptysis, 1—total, 23.

General Results.—The general condition on discharge may be given as follows:—Very much improved, 16; unchanged, 7—total, 23.

Non-Pulmonary Cases Discharged.

The cases discharged during the year numbered 13. These may be classified as follows:—Abdominal, 4; adenitis, 2; osteitis, 6; non-tuberculous, 1—total, 13.

Duration of Illness.—The duration of illness on admission, stated in monthly periods, was as follows:—

Months,	1-3	3-6	6-12	12-18	18-24	24 & over.	Total.
	2	—	2	1	3	5	13

General Results.—The general condition on discharge may be given as follows:—Very much improved, 11; improved, 1; unchanged, 1—total, 13.

Other Institutions.

In addition to the cases treated at the District Sanatorium, cases were treated in other institutions in the County, viz.:—County Hospital, Motherwell, 11; and Hairmyres Colony, 1.

Bovine Tuberculosis.*Veterinary Inspection of Dairy Herds.*

The prevalence of tuberculosis of the udder among dairy stock is detailed in the following table, which shows the work done in the Upper Ward during the year. Samples of milk were drawn from all udders which upon examination showed conditions suspicious of tuberculosis. 10 samples of milk were taken in this way, and sent to the County Laboratory for examination, when 3 proved positive.

In the positive cases certificates were granted by the County Veterinary Surgeon, stating that the animal suffered from tuberculosis of the udder. Notice was sent to the owner by the Medical Officer of Health, directing attention to the requirements of Section 5 of the Milk and Dairies (Amendment) Act, 1922, suggesting, at the same time, that the animal should be sent for slaughter. The owner was requested to communicate with the Public Health Department, stating as to how and when it was intended to dispose of the animal.

Cows with abnormal conditions of the udder other than tuberculosis are also recorded, and the results are as shown in the following table :—

1924.—VETERINARY INSPECTION OF DAIRY HERDS.

PARISH.	Herds.	Cows.	Suspected Tubercle.						Cows with Abnormal Condition of Udder.						Totals.
			Samples of Milk.	Result.				Suspected Tubercle.	Atrophy.	Mammitis.	Induration N.T.	Eruption on Teats			
				Smear.	Biological.										
					+	-	+						-		
Biggar,	2	52	1	...	1	...	...	1	2	...	1	...	4
Carluke,	30	600	...	...	...	...	...	...	5	...	5	...	10
Carmichael,	3	32	...	...	...	...	...	...	...	...	...	...	...
Carnwath,	70	1,524	4	1	3	2	...	4	33	5	8	4	54		
Carstairs,	12	466	1	...	1	1	...	1	16	1	4	4	26		
Covington,	3	68	...	...	...	...	...	...	2	2	...	...	4
Crawford,	...	...	...	...	...	...	...	...	...	...	...	...	...
Crawfordjohn,	2	38	1	...	1	...	1	1	2	...	...	...	3
Coulter,	...	...	...	...	...	...	...	...	...	...	...	...	...
Dolphinton,	...	...	...	...	...	...	...	...	...	...	...	...	...
Douglas,	3	56	1	...	1	...	...	1	2	...	...	1	4
Dunsyre,	10	159	...	...	...	...	...	...	2	2	...	...	4
Lamington,	...	...	...	...	...	...	...	...	...	...	...	...	...
Lanark,	8	73	...	...	...	...	...	...	...	...	...	...	...
Lesmahagow,	44	1,125	2	...	2	...	1	2	25	6	11	2	46		
Libberton,	12	334	...	...	...	...	...	...	7	2	...	...	9
Pettinain,	1	29	...	...	...	...	...	...	2	...	1	...	3
Symington,	4	41	...	...	...	...	...	...	...	...	...	...	...
Walston,	1	20	...	...	...	...	...	...	...	...	...	...	...
Wiston, &c.,	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals for Upper Ward,	205	4,617	10	1	9	3	2	10	98	18	30	11	167		

TABLE E.

REGISTRATION DISTRICTS.	Registered (corrected for transfers).	BIRTHS.		NUMBER OF VISITS.				ATTENDANT AT CONFINEMENT.				Total combined transfers.
		Alive.	Notified. Still-born.	First.	Subsequent.	Special.	TOTAL.	Doctor.	Certified Midwife.	Handy Woman.		
<i>Chiefly Industrial.</i>												
Carluke,	263	263	2	229	1,331	441	2,001	263	2	...	...	17
Carmichael,	46	44	...	44	345	133	522	30	14	...	...	2
Carnwath,	34	32	...	25	117	5	147	27	...	...	...	6
Forth,	67	69	3	52	466	86	604	67	4	1	...	4
Haywood,	88	83	...	79	389	69	537	46	34	3	...	6
Carstairs,	51	50	3	40	310	134	484	52	1	...	...	...
Leadhills,	9	10	...	...	...	...	...	10	...	...	...	1
Douglas,	81	77	5	58	379	323	760	79	3	...	...	...
Lanark,	33	32	...	20	275	24	319	30	1	1	...	2
Leshmahagow,	233	228	8	163	1,233	450	1,846	212	21	3	...	19
Kirkfieldbank,	31	30	2	28	199	27	254	20	12	...	...	3
Coalburn,	93	91	4	81	598	167	846	95	...	...	...	9
Total,	1,029	1,009	27	819	5,642	1,859	8,320	931	92	13	...	81
<i>Chiefly Agricultural.</i>												
Biggar,	8	8	...	6	14	...	20	8	...	...	...	3
Covington,	4	3	1	4	66	...	70	4	...	...	...	...
Crawford,	20	20	1	17	214	...	231	21	...	...	...	...
Crawfordjohn,	17	11	...	...	...	...	...	11	...	...	...	2
Coulter,	5	6	...	4	25	...	29	6	...	...	...	...
Dolphinton,	4	2	...	...	...	...	...	2	...	...	...	...
Dunsyre,	5	5	1	...	...	...	...	6	...	...	...	...
Lamington,	3	2	...	...	...	...	...	2	...	...	...	...
Libberton,	5	3	...	...	...	...	...	3	...	...	...	...
Pettinain,	4	4	...	3	14	...	17	4	...	...	...	...
Symington,	5	4	1	3	20	6	29	5	...	...	...	...
Walston,	3	3	1	...	...	...	...	3	1	...	...	...
Wiston,	7	7	...	...	...	...	...	7	...	...	...	...
Total,	90	78	5	37	353	6	396	82	1	...	...	5
Combined Total,	1,119	1,087	32	856	5,995	1,865	8,716	1,013	93	13	...	86
Burgh of Biggar,	16	17	2	16	116	5	137	19	...	...	...	...
Burgh of Lanark,	136	146	4	86	526	72	684	130	17	3	...	8
Total,	1,271	1,250	38	958	6,637	1,942	9,537	1,162	110	16	...	94

Owing to the prevalence of foot-and-mouth disease in the early part of the year, the inspection of dairy herds by the veterinary staff was suspended for a considerable period, which explains the decrease in the number of herds examined.

Refractories Industries (Silicosis) Scheme.

The only work coming under the above heading is the brickwork belonging to the Clydesdale Brick and Quarry Company. Again, owing to the depression of trade, work was only carried out for a very short period in the early months of the year, the brickworks being closed for the rest of the year. 14 examinations were carried out—males, 4; females, 10. Of these, 8 were first examinations, and 6 were second or subsequent examinations. The general physique was good, and no evidence of any disease was found.

MATERNITY AND CHILD WELFARE.

While the Burghs of Biggar and Lanark are included in the Upper Ward Scheme, the statistics relating to the three areas are given separately.

Upper Ward.—Staffing Arrangements.—The staffing arrangements remain as stated in previous reports. Three whole-time Nurse Health Visitors are employed, and the services of the District Nurses in Biggar, Crawford, Thankerton, Forth, and Lesmahagow are obtained as part-time Health Visitors in connection with this scheme.

Births.—The number of births registered in the Upper Ward, corrected for transfers, numbered 1,119—males, 575; females, 544; the birth-rate for the year being 23·1 per 1,000 of the population. Of the 1,119 births, 70 were illegitimate—males, 37; females, 33; giving an illegitimate rate of 6·2 per 100 births.

Notifications of Birth.—Of the total births, 1,094 were registered in the district, and of these, 1,087 were notified, or 98·4 per cent. In addition, 32 still-births were notified—30 by the medical practitioner in attendance, and 2 by certified midwives. Of the total births, 1,013 were attended by doctors, 93 by certified midwives, and 13 by uncertified midwives.

Table E shows the births registered, births notified, visits made by the Nurse Health Visitors, the attendant at confinement as ascertained at the first visit, infant deaths registered, and the infantile death-rate, the information being tabulated according to registration districts, and sub-divided into agricultural and industrial areas.

Infantile Mortality.—After correction for transfers, the deaths of infants under 1 year of age numbered 86—males, 49; females, 37. 78 of these deaths were registered in the district, the infantile mortality rate for the year being 76·7 per 1,000 births, as compared with 64·6 for the previous year. Of the 86 deaths, 80 were legitimate infants—males, 47; females, 33; giving a legitimate mortality rate of 71·4 per 1,000 births, while the illegitimate deaths numbered 6—males, 2; females, 4; giving the illegitimate mortality rate of 5·3 per 1,000 births. Classified according to groups of diseases, 30 or 34·8 per cent. were due to developmental causes, which include prematurity, atrophy, &c. Of these 30 deaths, 19 or 63·3 per cent. occurred during the first four weeks of life.

Of the acquired diseases, the largest number of deaths were due to respiratory diseases—pneumonia, 10; bronchitis, 8; other respiratory diseases, 1; equalling a total of 19, being 22 per cent. of the total infant deaths. In the infectious diseases group, whooping-cough was the cause of 4 deaths; measles, 3; diphtheria, 1; equalling a total of 8, being 9·3 per cent. of the total infant deaths.

Table F shows the infant deaths arranged according to the classification requested by the Board of Health.

TABLE F.

Cause of Death.	Age Periods.						Total.			
	Weeks.		Months.							
	-1	1-4	1-3	3-6	6-12	-12				
Chickenpox, - - - -	-	-	-	-	-	-				
Measles, - - - -	-	-	-	-	3	3				
Scarlet Fever, - - - -	-	-	-	-	-	-				
Whooping-Cough, - - - -	-	-	-	2	-	2	4			
Diphtheria and Croup, - - - -	-	-	-	-	-	1	1			
Erysipelas, - - - -	-	-	-	-	-	-	-			
Tuberculous disease, - - - -	-	-	-	-	1	2	3			
Meningitis (not tuberculous), - - - -	-	-	-	1	-	1	2			
Hydrocephalus, - - - -	-	-	-	-	-	-	-			
Convulsions, - - - -	-	-	-	1	-	1	2	4		
Pneumonia (all forms), - - - -	-	-	-	-	-	2	1	7	10	
Influenza, - - - -	-	-	-	-	-	-	-	1	1	
Bronchitis, - - - -	-	-	-	-	-	-	3	3	2	8
Diarrhœa and Enteritis, - - - -	-	-	-	-	-	-	4	4	3	11
<i>Forward,</i> - - - -	-	-	-	1	-	13	11	22	47	

TABLE F (Continued).

Cause of Death.	Age Periods.						Total.	
	Weeks.		Months.					
	-1	1-4	1-3	3-6	6-12	-12		
<i>Forward,</i>	-	-	1	—	13	11	22	47
Other digestive diseases,	-	-	—	—	—	1	—	1
Congenital malformation,	-	-	—	—	1	1	—	2
Congenital heart disease,	-	-	2	—	—	—	—	2
Premature birth,	-	-	4	2	1	—	—	7
Atrophy, Debility, and Marasmus,	-	-	9	2	5	1	2	19
Atelectasis,	-	-	—	—	—	—	—	—
Injury at birth,	-	-	1	—	—	—	—	1
Suffocation (overlying),	-	-	—	—	—	—	—	—
Syphilis,	-	-	—	—	—	—	1	1
All other causes,	-	-	3	1	1	1	—	6
			20	5	21	15	25	86

Maternal Mortality.—Inquiry is now made into all deaths that occur within four weeks after confinement, with a view to ascertaining the cause of these deaths. With the exception of cases removed to hospital within the County, the first intimation of these deaths comes from the returns of the local registrars.

8 maternal deaths occurred, and 5 of these were classified as diseases and accidents of pregnancy (cardiac failure and shock, 3; and hæmorrhage, 2). 4 of these occurred at home, and 1 in hospital.

Puerperal sepsis accounted for the remaining 3 maternal deaths. All 3 deaths occurred in the County Hospital, Motherwell, details being as follows :—

- (1) Age 23. M. Confinement natural. Lochia normal. Temperature rose on third day after confinement. Pneumonia present. Removal to hospital advised, as a blood infection was suspected. Lochia remained normal. Patient died on tenth day of illness Cause of death—puerperal fever; pneumonia.
- (2) Age 37. M. Confinement natural. Rigor occurred on third day after confinement, and again on fifth day. Removed to hospital. Patient delirious, and died on ninth day of illness. Cause of death—puerperal fever.

- (3) Age 25. S. Confinement—forceps. Two days' confinement; headache, sickness, vomiting, pyrexia. Rash on arms and legs. Removal to hospital. This case was complicated by patient having been in contact with scarlet fever shortly before confinement. Patient died on sixth day of illness. Cause of death—puerperal septicæmia (streptococcal).

The following statement shows the cases of puerperal sepsis and deaths occurring in the district for the past nine years :—

Year.	Cases.	Deaths.	Year.	Cases.	Deaths.
1916,	- - 1	1	1921,	- - —	—
1917,	- - —	—	1922,	- - 1	—
1918,	- - —	—	1923,	- - 1	—
1919,	- - 3	—	1924,	- - 3	3
1920,	- - 2	1			

Ophthalmia Neonatorum.—During the year 3 cases were notified by the medical practitioners in attendance. Visits were made by the Nurse Health Visitors, and the cases were classified as mild. All cases made complete recoveries, with no impairment to vision. 1 case was removed to hospital on account of inattention of the parents.

Measles and Whooping-Cough.—The sources of information regarding the presence of these diseases have been already stated in a previous part of the report. The system of voluntary notification by schoolmasters, which had fallen into disuse during the war, was revised, and a circular, accompanied by notification forms, was sent to each school asking for their co-operation in this matter. In conjunction with this, special efforts were made by the whole-time Nurse Health Visitors, during their routine visitation, to find out and report to the department all cases detected by them. Much valuable information accrued from the concentration on these two particular sources of information. Towards the end of the year the suggestion in the Board of Health's circular of 17th March regarding the partial notification of measles and whooping-cough under the Maternity and Child Welfare Scheme was adopted by the Committee, and is at present in force. This notification applies only to children under 5 years. The first cases only of the above diseases occurring in a household are to be notified, and for this purpose the first cases in a household will be interpreted as excluding any cases occurring within 14 days after the detection of a prior case in a household. Approval of the payment of the usual notification fee was given by the Board of Health. Details as to the prevalence of these two diseases are given on pages 15-17.

Home Visitation.—The visits made under the scheme, excluding the two Burghs which are given later, numbered 8,716, of which 856 were first visits, 5,995 subsequent visits, and 1,865 special visits. Of these visits, 726 first visits, 4,893 subsequent visits, and 1,860 special visits were made by the Nurse Health Visitors. The visits made by the District Nurses numbered 130 first visits, 1,102 subsequent visits, and 5 special visits, giving a total of 856 first visits, 5,995 secondary visits, and 1,865 special visits. Special visits included measles, 1,194 visits; expectant mothers, 142; and whooping-cough, 485.

From the information obtained it was found that 33 infants were born prematurely, and 823 born at full-time.

The total visits, including the two Burghs, were as follows:—958 first visits, 6,637 subsequent visits, and 1,942 special visits, giving a total of 9,537 visits paid under this scheme.

Child Welfare Centres.—The attendances and consultations at the three Child Welfare Centres were as follows:—

			Mothers.	Babies and Children.	Consultations.
Lanark,	-	-	474	679	32
Carluke,	-	-	720	906	40
Coalburn,	-	-	258	334	30

During the year 7 lectures were given at the various Centres.

Necessitous Cases.—The number of cases receiving assistance remained about the same as the previous year. These cases were certified on medical grounds, and numbered 84, consisting of children, 82; nursing mothers, 2.

Hospital Admissions.—During the year there were 26 admissions to the County Maternity Hospital, Bellshill, which were as follows:—Normal confinements, 5; abnormal confinements, 11; illness connected with pregnancy, 9; children under 5 years, 1.

To the County Hospital, Blantyre, there were 3 admissions:—Illness connected with pregnancy, 2; children under 5 years, 1.

To the County Hospital, Motherwell, there were 4 admissions:—Puerperal sepsis, 3; ophthalmia neonatorum, 1.

To the County Convalescent Home, Calderbank, there were 3 admissions:—Illness connected with pregnancy, 2; children under 5 years, 1.

Burgh of Lanark.—The number of births in the Burgh, after correction for transfers, amounted to 136, of which 4 were illegitimate, giving a birth-rate of 21·8 per 1,000 of the population. The attendants at birth will be found in Table E, which also gives the number of births notified, and the visits made by the Nurse Health Visitors.

Infantile Mortality.—The deaths of infants under 1 year numbered 8, giving an infantile mortality rate of 58·8 per 1,000 births. The causes of death were:—Premature birth, 2; congenital malformation, 1; pneumonia, 4; other defined diseases, 1—total, 8.

Ophthalmia Neonatorum.—No cases were notified during the year.

Hospital Admissions.—During the year 6 cases were admitted to hospital:—County Maternity Hospital, Bellshill, 5—normal cases of confinement, 2; abnormal cases of confinement, 2; illness connected with pregnancy, 1. County Convalescent Home, Calderbank—1 child under 1 year.

Necessitous Cases.—The number of cases who received assistance during the year showed an increase in comparison with last year, being 30, as follows:—Children under 5 years, 29; nursing mother, 1.

Burgh of Biggar.—The number of births, after correction for transfers, amounted to 16—males, 9; females, 7—giving a birth-rate of 11·4 per 1,000 of the population. Of these births, 1 was illegitimate, giving an illegitimate rate of 6·2 per 100 births.

Notifications of birth and the attendants at birth, as well as the visits made by the Nurse Health Visitor, will be found in Table E.

Infantile Mortality.—There were no deaths under 1 year.

Hospital Admissions.—There were no admissions to hospital.

Ophthalmia Neonatorum.—No cases were notified.

Necessitous Cases.—Assistance was granted to 1 case.

GENERAL SANITATION.

Housing.

Building By-Laws.—During the year 88 sets of plans were submitted to the Committee. These related to new buildings and to alterations and additions to existing properties, the details of which will be found in the Report of the Sanitary Inspector.

Housing, &c., Act, 1919.—The various houses erected by the Committee under this scheme, 618 in all, are now completed and occupied.

Housing (Subsidy) Act, 1923.—Under this scheme the 12 houses of two apartments, with scullery and bathroom, to be erected at Carnwath by the Committee are nearing completion. In addition, 26 houses were erected in the district by private enterprise, each qualifying for the subsidy grant of £82.

Housing (Financial Provisions) Act, 1924.—It is proposed by the Local Authority to erect, under this Act, 184 houses, 144 being two-apartment houses, with bathroom and scullery, and 40 being of three apartments, with bathroom and scullery. With the exception of Carluke, all the houses rank as houses built in rural areas. The distribution of the houses are as follows:—

	2-apartments.	3-apartments.
Carluka,	60	24
Law,	16	—
Carnwath,	8	8
Carstairs Village, ...	12	—
Carstairs Junction, ...	20	—
Thankerton,	4	4
Douglas,	8	4
Pettinain,	8	—
Kirkfieldbank,	8	—
	<hr/>	<hr/>
	144	40
	<hr/>	<hr/>

Improvement of Insanitary Areas.—Under this scheme 100 houses were to be erected by the Local Authority, consisting of two apartments, bathroom, and scullery. These were allocated as follows:—Forth, 40; Coalburn, 32; Carluka, 28; all of which are nearing completion.

In the month of February a circular was issued by the Scottish Board of Health with regard to improving the amenities of housing in mining areas, and a report was forwarded to the Board. Following upon this report, an inspection of the properties mentioned therein was made by the Chief Housing Inspector for the Board of Health. Details of this will be found in the report by the Sanitary Inspector, page 109.

Water Supply.

PUBLIC SUPPLIES.—*Carluke.*—With a view to augmenting the existing supply two samples were taken, one from an opencast on the lands of Gateside Farm, near Kilncadzow, and another from a spring situated on the lands of Leamuir Farm, Carluke. These were submitted to the Chemist, who reported as follows:—"The results afford no evidence of organic contamination. The amount of mineral salts, as indicated by the hardness, renders this water totally unfit for domestic purposes."

Forth and Wilsontown.—As mentioned in last year's report, owing to the increase in the number of houses and the consequent increased consumpt of water, the committee approved of a scheme whereby springs at Lambcatch are being collected into a tank in order to augment the existing supply from Lower Throughburn. The springs were measured after a long period of drought, the combined flow being 26,000 gallons in 24 hours. A sample procured was certified by the Chemist to be water of great purity, and only required the removal of the suspended matter to constitute a satisfactory domestic supply.

Crossford and Hazelbank.—As previously reported, this area has been formed into a Special Water District, and the scheme has now been completed.

PRIVATE SUPPLIES.—*Summit School Well.*—A sample was taken of this water for examination, and the results of examination showed that "this water was of great purity, and only required the removal of suspended matter to make it a highly satisfactory supply for all purposes."

Hawksland.—A sample from this well was taken for examination, and the results showed that "the water was of great purity and suitable in every respect for domestic purposes."

Linnmill, Kirkfieldbank.—Two samples were taken from this well for examination, and the results on both occasions showed that "the water was of doubtful purity and liable to pollution."

North Garngour Farm.—A sample was taken from a tap in the boiler-house at this farm, and the results showed that "the water was free from nitrogenous organic pollution of animal origin, but contained an excessive amount of vegetable matter. In its present condition it was not considered satisfactory as a domestic supply, but removal of the suspended matter would considerably improve its quality, both physically and chemically."

Harelaw Farm, Carstairs.—A sample was taken from the proposed additional water supply to this farm, but on analysis the water was found of insufficient purity for domestic purposes.

Teaths, Lesmahagow. — A complaint was received regarding the polluted condition of the water supply to two ploughmen's houses at Teaths. On analysis in the Chemical Laboratory the water was found to be quite suitable for domestic purposes.

Drainage and Sewage Disposal.

Symington.—A letter was received from the Scottish Board of Health, enclosing an anonymous complaint received from the Board as to the insanitary condition of the village of Symington. A report was made by the Medical Officer of Health on the matter, and a copy of the report was forwarded to the Board, pointing out that the question of proceeding now with the formation of a special drainage district in Symington, which had previously been delayed on account of the high rate, would be considered.

Carlisle.—The work of providing settling tanks before distributing the sewage on to the irrigation fields has now been completed and is in operation. A marked improvement has taken place in the effluent to Jock's Burn.

Further particulars of the various other districts will be found in the report of the Sanitary Inspector.

Scavenging.

The number of special scavenging districts in the Upper Ward is now 13, and details of the various districts will be found in the report of the Sanitary Inspector.

Workshops.

The registered workshops in the district are dealt with in the report of the Sanitary Inspector. A total of 171 inspections were made, and there were no prosecutions.

Dairies.

No complaints were received during the year regarding the milk produced in the district.

Milk (Special Designations) Order (Scotland), 1922.—At the end of the year there were eight producers of "Grade A" (tuberculin-tested) milk and one "Grade A" in the district. The bulk of the

“Grade A ” (tuberculin-tested) milk is sent out of the district, but in two instances a certain amount is retailed in the Burgh of Lanark and in the Carluke district.

Food and Drugs.

The administration of the Sale of Food and Drugs Act is undertaken by the County Council, and full information as to the samples taken for analyses and other work done will be found in the County Report.

Food Poisoning.

During the year one outbreak of suspected food poisoning was reported. This occurred in the village of Forth, and in all 15 households were affected, the patients numbering 24, though, in pursuing investigations, several other persons were discovered later who had suffered to a less extent. The symptoms in each case were similar. All the patients presented gastro-intestinal symptoms of varying severity—vomiting, diarrhoea, and abdominal pains while in the most severe cases symptoms of collapse were seen. Though in a few cases the symptoms were definitely severe, all patients made a good recovery. No ocular symptoms were observed in any of the cases. On enquiry it was found that every affected person had partaken of pressed tongue bought from a van which supplied the district, while in two of the affected cases nothing but pressed tongue alone had been partaken of. The average time elapsing between the taking of the tongue and the onset of symptoms was about three hours.

Samples of the tongue were obtained from several of the affected households, and one sample was obtained from a household who had partaken of it but had not suffered in any way. The remainder of that particular slab of tongue was obtained from the van supplying it.

The bacteriological examination of the samples showed that, on cultivation, *B. Coli* was present in each of the samples from affected households, but none was present in the sample from the unaffected household. From several of the samples small colourless colonies were obtained, but these failed to give the reactions of any of the food-poisoning groups of bacteria on the confirmatory tests being applied. Feeding experiments were also carried out, but these, as well as the bacteriological results, were negative.

After 14 days blood specimens were obtained from 12 of the patients. These specimens of blood were examined by the agglutination test with the food-poisoning group of bacteria, but all proved negative.

Meat Inspection.

Details of the work performed at the Public Abattoirs and Private Slaughterhouses during the year are given in the report of the Sanitary Inspector.

Public Health (Meat) Regulations (Scotland), 1923.—It is proposed, in order to meet the requirements of the Board of Health, to provide at the four Public Abattoirs suitable weighing apparatus and to make some extension at the Carluke Abattoir.

Under the above Regulations, it is required that the days and hours of slaughtering should be stipulated in the licences of all Private Slaughterhouses, so that carcasses may be inspected as frequently as possible. This matter is dealt with in the Sanitary Inspector's Report.

The Committee decided to adopt Article 12 of the Regulations relating to the sale and storage of meat or meat-food products, and it is proposed to grant certificates annually for that purpose.

Offensive Trades.

The premises which comes under this heading are the four Public and seven Private Slaughterhouses, the knacker's yard at Whitelees, Lanark, and the bone de-greasing business at Braidwood. These were regularly inspected by the Sanitary staff. At the knacker's yard a small settling tank was installed with a view to preventing, as far as possible, pollution of the burn into which drainage is discharged.

The bone de-greasing business at Braidwood continues to be carried on in a satisfactory manner. A verbal complaint was received regarding the emission of offensive vapours from the premises, but on investigation it was found that the smell complained of arose from a heap of burning garbage.

Rivers Pollution.

The administration of the Rivers Pollution Prevention Acts is undertaken by the County Council, and information as to the action taken will be found in the County Report.

Report of the Sanitary Inspector.

Housing.

Building By-Laws.—88 sets of plans were lodged during the year in terms of the Building By-Laws. These plans related to new buildings and to alterations and additions to existing properties. The plans, together with the relative schedules of information, were examined, reported upon, and submitted to the Public Health Committee.

Plans, in order to be considered by the Committee at their ordinary monthly meetings, must be lodged with the District Clerk, and all points in connection therewith adjusted with the Inspector of Buildings, not later than the eighth day of each month. It is again desirable to emphasise this fact, as too frequently plans are sent in late, causing delay and disappointment.

When the plans are approved by the Committee they are returned, together with three forms of intimation, which are later to be forwarded to the District Clerk in the following order, indicating the progress of the work:—(1) commencement of work; (2) drain testing; and (3) completion of buildings.

In all 264 inspections were made of new buildings, and 64 smoke tests were applied to drainage systems. In addition to these a number of smoke tests were applied to drains of existing buildings.

The tabular statement appearing on opposite page shows the number of plans dealt with in the course of the year, arranged according to parishes.

During the year 16 houses were provided by private enterprise. Details of these are as follows:—

Dwelling-house of 7 rooms and kitchen, with scullery, bathroom, &c., at Auchenheath Tile Works.

Villa of 5 rooms, kitchen, scullery, bathroom, &c., at Mid-road, Biggar.

PARISH.	No. of Plans.				New Houses and Apartments.				Apartments added to Existing Houses.				
	Submitted	Passed	Rejected	Not pro- ceeded with	Two	Three	Four	Five and upwards	One	Two	Three	Five	Total
Biggar, -	4	4	...	...	...	1	2	2	...	...	1	...	...
Carluke, -	24	24	...	...	...	3	5	6	1	...	...	...	14
Carmichael, -	4	4	...	...	...	1	...	...	...	...	...	...	1
Carnwath, -	10	9	1	1	41	...	...	...	1	...	...	...	41
Carstairs, -	4	4	...	...	...	...	...	...	...	...	...	...	...
Covington, &c., -	1	1	...	...	...	...	...	1	...	...	...	...	1
Crawford, -	6	6	...	...	...	...	1	...	2	...	...	...	1
Crawfordjohn, -	2	2	...	...	...	1	...	...	...	...	...	...	1
Coulter, -	1	1	...	...	...	...	...	...	...	...	...	...	...
Dolphinton, -	1	1	...	...	...	...	...	...	...	...	...	...	...
Douglas, -	5	5	...	1	13	3	...	...	...	...	...	...	16
Dunsyre, -	...	...	...	...	...	...	...	...	...	...	...	...	...
Lamington, &c., -	...	...	...	...	...	...	...	...	...	...	...	...	...
Lanark, -	8	8	...	1	...	2	...	...	...	...	...	1	...
Lesmahagow, -	14	14	...	...	33	...	...	1	3	...	2	...	34
Liberton, -	1	1	...	...	...	...	...	...	...	...	...	...	...
Pettinain, -	...	...	...	...	...	...	...	...	...	...	...	...	...
Symington, -	1	1	...	...	...	1	...	...	...	...	...	...	1
Walston, -	...	...	...	...	...	...	...	...	...	...	...	...	...
Wiston, &c., -	2	2	...	...	...	...	...	...	1	1	...	...	...
Total, -	88	87	1	3	87	12	8	10	8	1	3	1	117
													13
													28

Bathrooms,
Sculleries,
&c.

Corrugated-iron building of two apartments, scullery, &c., near Greenfield Farm, Tarbrax.

Bungalow of 5 apartments, scullery, bathroom, &c., at West Avenue, Carluke.

Villa of 7 apartments, scullery, and bathroom, at West Avenue, Carluke.

House of 6 rooms, kitchen, scullery, and bathroom, at Victoria Avenue, Carluke.

House of 8 apartments, scullery, bathroom, &c., at Biggar.

House of 8 apartments, scullery, bathroom, &c., at Sheriff-flatts, Thankerton.

Cottage of 4 apartments, with scullery, bathroom, &c., at Main Street, Leadhills.

Bungalow of 6 apartments, scullery, and bathroom, at Victoria Avenue, Carluke.

House of 4 apartments, scullery, and bathroom, at Poplar Glen, Carluke.

Bungalow of 6 apartments, scullery, and bathroom, at West Avenue, Carluke.

Villa of 6 apartments, scullery, and bathroom, at West Avenue, Carluke.

Double house, each comprising 4 apartments, scullery, and bathroom, at Southcroft, Biggar.

Cottage of 4 apartments, scullery, and bathroom, at West Avenue, Carluke.

In addition to the above, the following 26 houses were erected under the subsidy scheme whereby a grant of £82 for each house was approved.

Cottage of 3 apartments, with scullery, bathroom, &c., at Symington.

Bungalow of 4 apartments, scullery, bathroom, &c., off Clyde Street, Carluke.

Cottage of 3 apartments, scullery, bathroom, &c., at Braxfield Lodge, Lanark.

Cottage of 3 apartments, with scullery, bathroom, &c., at Gilkerscleugh, Crawfordjohn.

Shepherd's cottage of 3 apartments, scullery, bathroom, &c., at Parishholm Farm, Douglas.

Cottage, comprising living-room, 2 bedrooms, bathroom, &c., at Selkirk Street, Braidwood.

Fourteen workmen's houses, consisting of three flatted blocks, each of four houses of 3 apartments, scullery, and bathroom, and one cottage block of two houses of 4 apartments, scullery, and bathroom, at Douglas West.

Cottage of 3 apartments, scullery, and bathroom, at Bushelhead Road, Carluke.

Cottage of 3 apartments, scullery, &c., at Newside, Carmichael.

Cottage of 4 apartments, scullery, and bathroom, at Kirkstyle Road, Carluke.

Cottage of 3 apartments, scullery, and bathroom, at Jerviswood, Lanark.

Bungalow of 3 rooms and kitchen, scullery, and bathroom, at St. Oswald's Chapel, Carluke.

Workman's cottage of 3 apartments, scullery, and bathroom, at Netherton Lodge, Biggar.

Considerable progress was made during the year with the provision, in various mining and other areas, of Welfare Institutes, Recreation-rooms, &c. Buildings under this category, the erection of which was commenced in 1924, are given in the following list:—

Clubhouse and Committee-room, with modern conveniences, for Bowling Club, Law Junction.

Miners' Welfare Institute, at Douglas Water, comprising hall, retiring-rooms, billiard-room, library, bathrooms, lavatories, &c.

Welfare Hall at Woolfords Village for employees of Scottish Oils, Limited, consisting of hall and recreation-room, with modern conveniences.

Welfare Hall, with ante-rooms, &c., for Fence, Draffan, and District Miners' Welfare Society.

Hall, Recreation-room, &c., at Carmichael.

Hall, with ante-rooms, &c., at Libberton.

Alterations and additions to existing Reading-room; providing hall with suitable lavatory accommodation, &c., at Crossford.

Village Hall at Ravenstruther.

Recreation-hall at Dolphinton.

The other plans submitted related to alterations and additions to existing buildings, &c., among which were the following:—

Addition of room and Elsan closet to existing dwelling-house at Braehead, Carnwath; provision of water-closet in house at the Square, Coulter; alterations and additions to two existing dwelling-houses at Brookbank Nurseries, Carluke; addition to existing dwelling-house of bath-room, water-closet, &c., at Brocketsbrae, Lesmahagow; addition of bedroom to house at the Pleasance, Lanark; two new pavilions, with additions to existing administrative block, &c., at Bellefield Sanatorium, Lanark; additions and alterations to Lanark Golf Clubhouse; addition of bedroom and pantry to house in Stewart Street, Carluke; addition of 4 rooms and kitchen to dwelling-house at Huntlygate, Lanark; addition of packing-room and store-room at Preserve Works, Clyde Street, Carluke; erection of grocer's shop, &c., at Lower Braidwood, Carluke; conversion of hall into dining-room, 3 bedrooms, bathroom, &c., at Crossford Inn; addition of scullery, water-closet, &c., to house in Main Street, Forth; addition of bedroom and bathroom to cottage, Rosslyn, Blackwood; garage and shed at Havelock Cottage, Carluke; addition of bathroom at Kirkton of Crawford; 1 new bedroom and 4 new bathrooms to existing dwellings at Wiston; addition of bathroom to the Schoolhouse, Forth; addition of bathroom, bedroom, and dining-room at Lynville, Roberton; addition of storey to existing house, comprising 3 bedrooms and bathroom, at Woodhead Farm, Newtrows; addition of bathroom and water-closet to two houses in Stewart Street, Carluke; addition of bathroom at Greenbank Farm, Carluke; new pavilion (24 beds for adults) and boiler-house at Bellefield Sanatorium, Lanark; addition of 2 bedrooms to dwelling-house at Kirkfieldbank; addition of scullery, bathroom, and coal-cellar at Victoria Cottage, Carstairs; dressmaker's workshop at Forth; waiting-room and surgery at Douglas; introduction of 4 water-closets at Commercial Buildings, Carstairs; introduction of 1 water-closet at Old Post Office, Carstairs; erection of additional storey to existing one-storey building at Devonburn, Lesmahagow; addition of 3 bedrooms and bathroom to house at Main Street, Douglas; addition of bathroom and water-closet to Schoolhouse, Summit; addition of staffroom and water-closet to Leadhills School; alterations and additions to farmhouse, Kirkton of Crawford; alterations and additions to manager's house, Law Junction; alterations and additions to steading at Midtown Farm, Lesmahagow; addition of bedroom and bathroom at Lochanbank Cottage, Kirkmuirhill; erection of garage, Douglas Street, Carluke; addition of scullery and bathroom, &c., at Wetbush, Leadhills; addition of kitchen, bath-room, &c., at South Lodge, Abington.

Housing—Mining Areas.—In the month of February the Scottish Board of Health issued a circular, in which the question was raised of improving the amenities of housing in mining areas by measures such as provision of proper roads and footpaths, of better sanitary conveniences, and of more satisfactory arrangements for the removal of household refuse. The following report deals with conditions prevailing in the mining areas in the Upper Ward District:—

TARBRAK.—This village is wholly inhabited by shaleminers and is owned by the Scottish Oils, Ltd. The houses are of modern structure, each being provided with w.c., scullery, &c., and are lit by electric light.

Water Supply.—Gravitation (not a special district).

Drainage.—The sewage is treated by land irrigation (not a special district).

Sanitary Accommodation.—There are no privies or ashpits in the village.

Scavenging.—The household refuse is collected daily by the company's own servants and is satisfactorily carried out.

Roads and Footpaths.—The roads are bottomed with slag and surfaced with engine ashes and are in a good state of repair, the side streets being treated in the same way. The space between the scullery of each house is laid with concrete which ensures a degree of cleanliness in wet weather.

NEW WOOLFORDS.—This is a row of houses inhabited by miners and owned by the above company. The houses are of modern structure, each being provided with scullery, w.c., &c.

Water Supply.—By gravitation—a continuation of the Tarbrax supply.

Drainage.—The sewage is treated in a septic tank, the effluent discharging to the Dippool Burn.

Sanitary Accommodation.—There are no privies or ashpits existing in the row.

Scavenging.—Household refuse is removed thrice weekly by the company's employees.

Roads and Footpaths.—These houses front a main road. The path at the back of the row is bottomed with slag and covered with engine ashes and is in a good state of repair. The space between the two sculleries is laid with concrete.

OLD WOOLFORDS.—This is a row of houses inhabited by coalminers, owned by Matthew Hamilton, Esq., and leased by the Scottish Oils, Ltd. These houses are of a much older type and are not provided with modern conveniences.

Water Supply.—By gravitation, a continuation of the Tarbrax supply, but not laid on to the houses. The water has to be carried from stand pipes.

Sanitary Accommodation.—Pail privies and ashpits are in use. These were provided recently at the request of the Public Health Department. There are no wash-houses which necessitates the tenants washing in the houses.

Scavenging.—Not a special district. The ashpits are regularly emptied by the company's employees.

Roads and Footpaths.—Foundation is of slag surfaced with ashes. This row of houses was included in the list prepared under the scheme for the improvement of insanitary areas.

HAYWOOD.—This is the remains of a mining village and has been reported upon from time to time, and a detailed report upon it will be found in the Annual Report of 1922.

Water Supply.—Not a special district. Is obtained from a bore on the lands of Buchtknowes. The water is not laid on to the houses, but is drawn from Kennedy wells. During the summer months the supply is intermittent.

Sanitary Accommodation.—The sanitary conveniences consist of drop privies directly connected with ashpits. These are of the most primitive type.

Scavenging.—As Haywood is a special scavenging district, the ashpits are regularly scavenged.

Roads and Footpaths.—These are constructed, to a great extent, of broken bricks covered with ashes. The surfaces are very uneven and in wet weather are in a bad state. (This village was included in the list prepared under the scheme for the improvement of insanitary areas.)

WILSONTOWN.—Inhabited chiefly by miners and consists of:—

(1) *Quality Row.*—This is probably the oldest inhabited tenement in the district and is built of stone and lime with slated roof. The houses on the ground floor are entered by front doors while the houses on the upper floor are entered by back stairs. The houses are in a fair state of repair.

Water Supply.—Special district, but not laid on to the houses, being carried from standpipes.

Sanitary Accommodation.—Privy ashpits are in existence.

Scavenging.—Special district. The ashpits are regularly emptied. Outside wash-houses are provided, but no water laid on.

Roads and Paths.—Bottomed with slag and surfaced with ashes.

(2) *Red Row and Store Square.*—These are very old houses built of stone and lime with slate roofs.

Water Supply.—Special district, water being carried from stand pipes.

Sanitary Accommodation.—Privy ashpits are in existence.

Scavenging.—Special district. The ashpits are regularly emptied.

Roads and Footpaths.—Bottomed with slag and surfaced with ashes.

(3) *Pleasance Row.*—This is a good structure of stone and lime with slated roof. Just prior to the war the company agreed to erect sculleries with w.c., coal cellar, and washtub for each house, but the war intervened and the work was not proceeded with. The Public Health Department are again negotiating with the company to have this work done.

Water Supply.—Special district. Water is not laid on, the supply being carried from standpipes.

Sanitary Accommodation.—Privy ashpits are in existence.

Scavenging.—Special district. The ashpits are regularly emptied.

Roads and Footpaths.—Bottomed with slag and surfaced with ashes.

(4) *Calder Terrace.*—This is a more modern structure, built about 10 years ago.

Water Supply.—Special district. Water is laid on to each house.

Sanitary Accommodation.—Each house is provided with scullery, w.c., sink and washtub, and with coal cellar accommodation.

Scavenging.—Special district. Dustbins are in use and regularly emptied.

Roads and Footpaths.—The front road is bottomed with slag and surfaced with red blaes. The enclosed yard behind each house is laid with concrete.

Plan of this terrace is to be found in the District Sanitary Inspector's Annual Report, 1914.

(5) *Wilsontown Terrace.*—This consists of a row of 26 houses built of stone and lime, with slated roofs.

Water Supply.—Special district. Water is laid on to each house.

Sanitary Accommodation.—Each house is provided with scullery, w.c., washtub, sink, and coal cellar.

Scavenging.—Special district. Dustbins are in use and emptied three times weekly.

Roads and Footpaths.—The property fronts the main highway and paths leading to the houses are surfaced with ashes.

FORTH.—Many inhabitants of the village are employed at the local collieries. The great bulk of the property is in good repair with the exception of Bank Row, which was included in the list of properties submitted under the scheme for the improvement of insanitary areas.

Water Supply.—Special district. Water is laid on to a number of the houses, but standpipes are also in use.

Sanitary Accommodation.—Though a number of houses are provided with water-closets, in the majority privy ashpits are in use.

Scavenging.—Special district. The ashpits are regularly emptied by the Local Authority's employee.

Roads and Footpaths.—The houses, in the majority of instances, front the main road and footpaths are in good condition.

Bank Row, Forth.—These houses are very old, built of stone and lime with thatched roof, mostly of the single apartment type.

Water Supply.—Special district. Stand pipes are in use.

Sanitary Accommodation.—Pail closets and ashpits are in use.

Scavenging.—Special district. Ashpits are regularly scavenged.

Roads and Footpaths.—The path leading to the houses is of an uneven surface.

CARLUKE.—On the outskirts of the town there are several properties mainly inhabited by mine workers. These are as follows:—

(1) *Dyke Row.*—Owned by Shotts Iron Company, Ltd. Is a good stone and lime structure with slate roof.

Water Supply.—Special district. Recently water has been laid on to each house.

Sanitary Accommodation. Water-closets have been introduced in the proportion of one to four tenants, and sinks have been provided in each house. All privy ashpits have been abolished.

Scavenging.—Special district. Household refuse, which is placed in suitable dustbins, is collected three times weekly.

Roads and Footpaths.—Fronts a main road maintained by Local Authority.

(2) *Weighhouse Row.*—Owned by above company. A number of years ago the company replaced the thatched roof with a slate roof and renovated the interior of the houses.

Water Supply.—Gravitation supply from stand pipes.

Sanitary Accommodation.—New wash-houses and privy ashpits were provided when the houses were renovated. Water has recently been laid on to the wash-houses. The necessity of providing modern conveniences is being kept in view by the company and the General Manager requested that, if this work was carried out, the Local Authority would extend the boundaries of the scavenging district to include this property.

Scavenging.—Presently carried out by the company's own arrangements.

Roads and Footpaths.—This property fronts a main road maintained by Local Authority.

(3) *Engine Row*.—This property was included in the list submitted under the scheme for the improvement of insanitary areas. Owned by above company.

Water Supply.—Gravitation. Is drawn off tap in washhouse.

Sanitary Accommodation.—Privy ashpits in use. A wash-house was erected for the convenience of tenants.

Scavenging.—Company's own arrangements.

Roads and Footpaths.—Foundation of slag and surfaced with engine ashes.

(4) *Heather Row*.—Owned by same company. Was also included in list submitted under the scheme for improvement of insanitary areas.

Water Supply.—Obtained from a 2½-inch pipe which runs continually and is drawn from the burn higher up. Samples of the water have been taken from time to time, and the Analyst's report shows it to be unsatisfactory.

Sanitary Accommodation.—Privy ashpits are in use.

Scavenging.—Ashpits are emptied by company's own arrangements.

Roads and Footpaths.—Fronts a main road maintained by Local Authority.

LAW.—Brownlee Rows.—Owned by Archibald Russell, Ltd. Built of brick with slate roof.

Water Supply.—Gravitation. Special district. Water laid on to each house.

Sanitary Accommodation.—Each house is provided with a scullery, w.c., sink, and washtub.

Scavenging.—Outwith scavenging district. Ashpits still in use, but regularly emptied by company.

Roads and Footpaths.—Surfaced with engine ashes and kept in good order.

Thornton's Row.—Owned by the Wilsons & Clyde Coal Company. Built of brick with slated roof and in good state of repair.

Water Supply.—Gravitation. Special district. Water is not laid on to each house. Standpipes are in use.

Sanitary Accommodation.—Privy ashpits are in use.

Scavenging.—Special district. Ashpits are regularly emptied.

Roads and Footpaths.—Property fronts main road maintained by Local Authority.

Wilson's Row.—Owned by same company. Built of stone and lime with slate roof. Is in a fair state of repair.

Water Supply.—Special district. Water not laid on to houses. Standpipes in use.

Sanitary Accommodation.—The existing accommodation consists of a small annexe with an earth closet for each house.

Scavenging.—Special district. Closet contents, along with household refuse, removed every second day.

Roads and Footpaths.—These are maintained in a fair state of repair.

PONFEIGH.—The village is practically wholly inhabited by mine workers. Owned by the Coltness Iron Company. A scheme for the provision of a new scullery with w.c., sink and washtub, with proper drainage facilities has just been completed. These improvements have been carried out at the request of the Local Authority. The village is included in a special scavenging, water, and drainage area, the household refuse being removed every morning. The village streets are bottomed with slag and surfaced with engine ashes.

DOUGLAS WEST.—Comprised of two rows of houses of comparatively recent construction. Each house is provided with scullery, sink, washtub, and w.c. The houses are lit by electric light. A number of the houses are of the cottage type and provided with bathrooms.

Water Supply.—Gravitation—private supply.

Scavenging.—While not included in the special scavenging district the company have arrangements for emptying the dustbins regularly.

Roads and Footpaths.—These are in good condition.

DOUGLAS.—In the village of Douglas proper there are a number of miners resident, employed at the surrounding collieries. As the village is included in the special water, drainage, scavenging, and lighting areas it does not call for any special comment.

Glespin Rows.—This property is leased by Kennox Coal Company, Ltd., and was included in the list submitted under the scheme for the improvement of insanitary areas. Full details regarding this property can be found in the Annual Report of 1922.

Water Supply.—Gravitation—private supply. Drawn from stand pipes. During a spell of drought there is a scarcity of supply.

Sanitary Accommodation.—Privy ashpits are in use, the ashpits being in a state of disrepair. No sinks—the slop water being emptied into gratings placed convenient to the houses and connected to a properly jointed drain which discharges to the Douglas Water. No proper wash-houses are provided; the existing accommodation consists of dilapidated wooden erections which were erected by the tenants themselves and which are not satisfactory.

Scavenging.—Done at owner's expense. The Public Health Department is periodically in communication with the owners regarding the emptying of the ashpits. The tenants themselves do very little to promote cleanliness, as it seems to be a practice to dump refuse indiscriminately instead of putting it in the ashpits. Large numbers of poultry are kept by many of the tenants and are allowed full scope over the surroundings, with the result that the ashpit contents are strewn over the adjacent ground.

Roads and Footpaths.—The site of these houses is not a suitable one in that it is low-lying and difficult to drain, as the houses are little above the level of the Douglas Water. In wet weather the water collects in pools in front of the houses, the surface drains having to be shallow and, therefore, with little or no gradient.

COALBURN.—Coalburn is wholly a mining village, and apart from the rows inhabited by the miners, a number of the smaller houses in the village are occupied by them. The village is included in the special districts for purposes of water and drainage. Prior to the war a large number of houses were erected by the Caprington & Auchlochan Collieries, Ltd., Garden Street, Glaishead, &c. These houses are provided with all modern conveniences, quite a number of them having bathrooms. No ashpits are in use at these properties, the company carrying out their own scavenging arrangements. The roads and footpaths throughout the village are in good condition.

The following are older properties on the outskirts of the village, viz., Bankend Rows, Sawdust Row, Coalburn Rows, Auchenbegg Row, and Bellfield Rows. Of these, Bankend Rows, Sawdust Row, and Auchenbegg Row were included in the list submitted under the scheme for the improvement of insanitary areas.

Bankend Rows—

Water Supply.—Special district. Water carried from stand-pipes.

Sanitary Accommodation.—Each house is provided with scullery, pail-closet, and coal cellar.

Scavenging.—Ashpits are in use and regularly emptied by the company's arrangements.

Sawdust Row.—The above also applies to this property.

Coalburn Rows—

Water Supply.—Special district. Water carried from stand-pipes.

Sanitary Accommodation.—Privy ashpits in use.

Scavenging.—Carried out at owner's expense.

Auchenbegg Row—

Water Supply.—Special district. Stand-pipes.

Sanitary Accommodation.—Two privies and ashpit for each block of houses, but these are, like the property, in a dilapidated condition.

Scavenging.—Done by the owners' arrangements.

Bellfield Rows—

Water Supply.—Special district. Water carried from stand-pipes.

Sanitary Accommodation.—Privy ashpits in use and are regularly emptied.

Roads and Pathways about the above properties are in a fair condition.

AUCHENHEATH—

Littlegill Row.—This property is included in the list submitted under the scheme for the improvement of insanitary areas.

Water Supply.—Special district. Water carried from stand-pipes.

Sanitary Accommodation.—Consists of two blocks, each comprising one wash-house, two privies, and one ashpit.

Scavenging.—Special scavenging district.

Roads and Footpaths.—The property fronts public highway.

Duke's Row.—This property is old, but is kept in a fair state of repair.

Water Supply.—Special water district. Water carried from standpipes.

Sanitary Accommodation.—Privy ashpits in use.

Scavenging.—Special scavenging district.

Roads.—This property fronts the public highway.

Longlea Terrace.—A large number of miners in this row work in Middle Ward collieries. The houses are in a fair state of repair.

Water Supply.—Special water district. Water carried from stand-pipes.

Sanitary Accommodation.—Privy ashpits are in use.

Scavenging.—Ashpits emptied at owners' expense.

Roads and Footpaths.—The road leading from Auchenheath Square to this row is privately owned and has previously been the subject of complaint. The surface of the road is very uneven and during wet weather is in a muddy condition

DRAFFAN.—These houses were originally built to house workers employed at Fence Colliery which has been closed for over 20 years. The tenants are now mostly employed in Middle Ward collieries.

Water Supply.—Not a special district. Supply from a well.

Sanitary Accommodation.—Privy ashpits are in use.

Scavenging.—Scavenged at owners' expense.

Roads and Footpaths.—The houses front the main road. Footpaths are kept in a fair state of repair.

BIGGARSEAT.—These houses are in the same category as the houses at Draffan, and the tenants are mostly employed in the Middle Ward District.

Water Supply.—Special district. Water carried from stand-pipes.

Sanitary Accommodation.—Privy ashpits in use.

Scavenging.—Done at owners' expense.

Roads and Footpaths.—Kept in a reasonable state of repair.

Following upon this report an inspection of the properties mentioned was made by the Chief Housing Inspector of the Board of Health, and the following is a summary of his recommendations:—

Old Woolfords.—I do not think it would be desirable to do much in the way of permanent repairs or in the provision of sanitary conveniences to this place, the houses being in such a condition as to make them right for demolition. The carrying out of some minor repairs to the roofs and floors of this property would help matters to some extent, but I do not think it would be advisable to press the owners to do much beyond this.

Haywood.—Nothing short of a total clearance would be effective in this place, and I would recommend that the Local Authority should have this necessity brought before them very clearly so that additional housing accommodation should be provided in order to permit of the closing down entirely of this village.

Forth.—*Bank Row.*—This row of houses is absolutely done and beyond the possibility of repair. It might be pointed that although several new houses have been constructed in Forth, both under the 1919 and under the Slum Clearance Scheme, nothing has been done with regard to closing down these uninhabitable properties.

In the village of Forth generally there are, as far as I could see, many other properties verging on conditions of uninhabitability. Most of the houses, however, appear to be well kept by the tenants, but there is lack of proper sanitary accommodation. There are still a number of houses in the village which are provided only with privies and ashpits, and I think something might still be done to improve these conditions throughout the village. The amenities of the houses generally in Forth are fairly good.

Carluke.—*Weigh-house Row.*—In the meantime I think the Local Authority might be left alone to deal with the company. As far as I could judge there is every hope of them succeeding in having the necessary repairs made at an early date.

Engine Row.—Nothing of a permanent nature in the way of repairs should be carried out here, but one or two minor things might be done in the meantime. A few carts of ashes on the roads would improve things to some extent, but I would recommend a closing order to be put into execution as soon as this is possible.

Heather Row.—These houses should be closed down at the earliest possible date. As a matter of fact they are about the worst I have seen anywhere for a long time. I would not recommend that any repairs should be done even as a temporary measure, as nothing short of a total reconstruction would be of any avail.

Law.—Thornton's Row.—Something should be done to put the scullery offsets into a better state of repair and sinks and water supply installed, and if this were done the houses would be reasonably fit for habitation for a few years to come. The dry closets are comparatively new and might serve for some time yet. A cart or two of ashes distributed over the entrances would also help to improve the amenities generally.

Wilson's Row. Law.—I would suggest that the Coal Company concerned should be urged to provide proper water-closets and scullery accommodation. The outhouses are urgently needing attention at the present time, and the two operations could be carried out concurrently. The District Sanitary Inspector informed me that the Coal Company say that the coal pits will only last a matter of seven or eight years now and it is not worth their while to carry out anything in the nature of permanent improvements. This, of course, is an old excuse, and even though it were true it is practically a certainty that the houses will continue to be occupied for a considerable number of years beyond the period stated. Under the circumstances it is up to the owners to put the houses into a state of habitability consistent with modern conditions.

Douglas.—Glespin Rows.—These houses were built somewhere about nearly 60 years ago, and were at the best only of a temporary character. I could not suggest much to be done in the way of permanent repairs, the only proper course to pursue being total demolition. The cleaning out of the ditch is at present urgently required, and the Local Authority should be asked to take immediate steps in this direction.

Coalburn.—Bankend Rows.—The only possible remedy for the state of affairs in these rows is their demolition, the houses being of such a nature as to render them hopeless so far as repairs are concerned.

Sawdust Row.—From the outside these houses appear to be very poor, but inside they are surprisingly comfortable, two of the houses particularly being in excellent condition and scrupulously kept. The floors, however, are in places considerably off the level, and in the case of one house at the end of the row the floor falls about 3 feet, this being caused by underground workings. The water is drawn from a supply provided by a standpipe.

Although these houses are wonderfully comfortable they are nevertheless structurally defective. Their good condition is entirely due to the care and attention expended on them by the tenants.

Coalburn Rows.—The houses are all in fairly good repair, although the sanitary conditions leave something still to be desired. Privy ashpits are still in use and water supply is got from standpipes in the vicinity. I understand, however, that the coal company who own

these houses have agreed to provide water-closets. I would suggest at the same time that sinks should also be provided, and the company should be urged to carry this out at an early date.

Auchenbegg Rows.—The sooner these houses are closed down the better, and I would suggest that the Local Authority should be urged to take steps in this direction immediately.

Auchenheath.—*Littlegill Rows.*—The only possible remedy for the existing state of affairs here is utter demolition, and the Local Authority should have alternative accommodation provided at the earliest possible date.

Longlea Terrace.—I would suggest that something should be done to have water-closets provided, and at the same time sinks might also be added to the existing houses. The road should be at once put into a proper state of repair.

GENERAL OBSERVATIONS.

I was satisfied, as a result of my inspection, that the Local Authority is alive to the needs of the district so far as housing and housing accommodation is concerned. During the course of my visits my attention was directed to many places where drastic alterations had been made to at one time unsatisfactory houses. In many places new water-closets and sinks had been introduced and the general amenities improved to a very considerable degree. In some places, too, such as Douglas West Village, new houses of very superior type had been provided and their number presently being added to by the coal companies, and these, it was hoped, would fix a standard for other coal companies to emulate.

There still remains, however, very much to be done. While the places particularly dealt with in the above report were amongst the worst in the Upper Ward District, there are others which are merging on the undesirable type. There are, of course, difficulties with regard to drainage and water supplies which make it difficult to have modern conveniences provided, but I found that wherever it was possible to do so the Local Authority were not unmindful of the possibilities of having these improvements carried out. The Upper Ward District of Lanarkshire are presently engaged on the construction of houses under the Slum Clearance Scheme at Forth, and several of the new houses are already occupied. I enquired if any steps had been taken to close down a corresponding number of uninhabitable houses in this village, as provided under the terms governing Slum Clearance Schemes. I was informed that nothing had been done in this direction. As a matter of fact, from what I could learn, the Local Authority were in the meantime simply choosing the best tenants they could get for the slum clearance houses without giving preference to tenants of uninhabitable properties. This state of affairs should be enquired into, and the Local Authority should be asked to provide the Board with a statement of the number of slum clearance scheme houses presently occupied, and also a statement with regard to their proposals for closing uninhabitable houses.

Whilst the recommendations which I have made with regard to each individual place described above should be suggested for the Local Authority's immediate attention, I might add that I would not recommend that the Board should unduly press the Local Authority with regard to this matter. There is still a very considerable shortage of houses in the district, and I am rather afraid that, in the event of undue pressure being brought to bear on the owners of these old properties, more harm than good might result. The Local Authority are having these improvements carried out judiciously, and I am strongly of the opinion that more can be done to improve the existing state of affairs in this way, than by bringing pressure to bear which might have the effect of the proprietors refusing to do anything.

I was shown a tenement property of modern construction, well built and finished, containing 14 houses and 2 shops, which the proprietor offered to the Local Authority as a gift rather than that he should be put to the expense of carrying out necessary repairs.

I might mention this to indicate the difficulties which Local Authorities are presently labouring under in their endeavours to carry out improvements, and I am convinced that a policy of persuasion is much more effective than one of coercion.

At the present time too the greater part of the coal pits are closed and the majority of the miners are on the dole. Rents are consequently far in arrears, and proprietors of property are thus very reluctant to carry out much in the way of repairs and make improvements on old properties which may in a few years be closed down.

Some of the properties dealt with in this report have been previously reported on with a view to the making of representations to the Committee for closing orders, and in this respect it is proposed, if closing orders are obtained, to house a corresponding number of the tenants in the 100 houses presently in course of erection under the scheme for the improvement of insanitary areas.

Housing Conditions.—Symington.—During the month of May a letter was addressed to the Minister of Health calling his attention to the dilapidated condition of Greenhead Cottage, Symington, and the following report was submitted in connection therewith:—

With reference to the letter addressed to the Minister of Health by the present tenant of the above cottage, I beg to state that the cottage referred to is in a dangerous condition and liable to fall in at any time. I am fully conversant with the conditions existing here, and have called repeatedly upon the tenant to do his utmost to find another house.

About 3 years ago the owner had the house emptied with a view to demolishing it. Before this was carried out the complainant was allowed to occupy the cottage, merely as an act of mercy until he could find other accommodation, it being clearly understood that he was only to be allowed to remain there for a short period.

The complainer has failed to find a suitable house, and it appears that no property owner in the district is very anxious to have him as a tenant.

In reference to the question of several parties having more than one house in the district, the fact is that many of the houses are let to visitors in the summer months, the owners retiring at that time to a smaller house which they also own. This is a matter over which I have no control.

With regard to the scarcity of houses in the district, this is the only party known to me who cannot be suited with a house at present.

I do not think there is any real need for the Committee to erect the smaller type of house here.

The complainer has now been housed in suitable accommodation, and the old house in question has been demolished.

State-aided Housing Schemes.—The appended table shows that the various housing schemes approved by the Scottish Board of Health have been completed. These houses are all of 3 or 4 apartments, and each is provided with scullery and bathroom.

Site.	No. of Houses to be built.	Houses Let.	Rent.
Temporary accommodation—			
Coalburn, - -	6	6	£15 12/-
Douglas, - -	4	4	15 12/-
Forth, - - -	4	4	15 12/-
Lesmahagow, - -	4	4	15
Rigside, - - -	12	12	15 12/-
Ponfeigh, - -	30	30	16 16/-
Permanent—			
Auchenheath, - -	20	20	20 and 24
Blackwood, - -	52	52	20 and 24
Carluke (Sandy Road),	48	48	20 and 24
Carluke (Shieldhill),	54	54	20 and 24
Carstairs, - -	14	14	20 and 24
Carstairs Junction,	50	50	20 and 24
Coalburn, - -	78	78	20 and 24
Douglas, - - -	40	40	20 and 24
Forth, - - -	54	54	20
Law, - - -	46	46	20 and 24
Lesmahagow, - -	102	102	20 and 24
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Housing (Financial Provisions) Act, 1924.—In connection with the circular issued by the Scottish Board of Health in September, 1924, the following information was supplied :—

It is proposed to build 184 houses in the following localities :—

	Two- apartments.	Three- apartments.
Non-rural—		
Carluke, - - - -	60	24
Law, - - - -	16	—
Rural—		
Carnwath, - - - -	8	8
Carstairs, - - - -	12	—
Carstairs Junction, - -	20	—
Thankerton, - - - -	4	4
Douglas, - - - -	8	4
Pettinain, - - - -	8	—
Kirkfieldbank, - - - -	8	—
	<hr/>	<hr/>
	144	40
	<hr/>	<hr/>

Only in the case of Carnwath is the site acquired part of the site acquired for 1919 state-aided scheme.

Description, superficial area, and rate of density—flatted, 4 in the block—(1) room and kitchen, with scullery, bathroom, &c., 580 superficial feet or thereby—24 to the acre (maximum); (2) two rooms and kitchen, with scullery, bathroom, &c., 700 superficial feet or thereby—24 to the acre (maximum).

The following is the estimated cost, including house drains, house paths, and fencing :—

(a) 2-apartment houses,	£375
3-apartment houses,	415
(b) Average price of land per acre,	8
(c) Roads (where new road necessary, per house),	15

It is anticipated that the houses will be completed within two years.

The number of houses already sanctioned for erection by the Local Authority, under Act of 1923, is 36 :—

Number already contracted for,	36
Number commenced,	36
Number completed,	None.

The following information as to the number of one- and two-apartment houses in each of the areas where building is proposed was

forwarded to the Board in connection with their circular of 27th November :—

Carluke,	...	...	...	...	754
Law,	...	...	...	...	266
Carnwath,	...	...	...	...	118
Carstairs Village,	...	...	...	...	64
Carstairs Junction,	...	...	...	...	161
Thankerton,	...	...	...	...	20
Douglas,	...	...	...	...	167
Pettinain,	...	...	...	...	21
Kirkfieldbank,	...	...	...	...	106

Housing, Town Planning, &c., Act, 1909.—In the course of the year 404 houses were inspected and reported upon, in terms of Section 17 of the Housing, Town Planning, &c., Act, 1909.

Of this number 222 houses were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation.

The insanitary houses above referred to were fully reported upon in 1922, but were revisited during the year 1924, when the District Sanitary Inspector was accompanied by the Board's Chief Housing Inspector.

Under the scheme for the clearance of slum properties 100 houses of 2 apartments, scullery, and bathroom are presently being erected, and while at the close of the year none of the houses were completed, quite a number of them were nearing completion and arrangements were being made to make a number of representations to the Local Authority with a view to the making of Closing Orders in respect of about 147 insanitary houses.

Housing, Town Planning, &c. (Scotland), Act, 1919.—It is of importance to notice the large number of water-closets, sinks, &c., that have been introduced to existing properties during the year.

As time advances there is a greater tendency on the part of tenants of houses, especially in the more populous areas, to regard outside dry closets with abhorrence, and to look upon the carrying of the domestic water supply from a stand-pipe in the street as being a decided disadvantage and anything but conducive to cleanliness, and the Public Health Staff have been unremitting in their efforts to secure, wherever possible, the provision of sinks for each house, with the water laid on, and where a water-closet cannot be provided for each individual dwelling to have conveniences provided in the proportion of 1 w.c. for every 2 tenants.

A difficulty not infrequently encountered in certain areas that tends to impede the progress of sanitary improvements relates to those properties held on a short lease (99 years), the expiry of which may occur within a few years' time. As was pointed out in the Annual Report for the year 1919, it would not appear unreasonable to approach the superior rather than the present owners, who do not willingly incur such considerable expense in view of the short period of the lease remaining.

To illustrate this point I may state that in Martinmas, 1924, several properties reverted to a superior. The superior has since been approached with a view to having the properties made reasonably habitable and modern sanitary conveniences introduced, and this has been promised.

Special attention continues to be given to those areas comprising special scavenging districts where the dry conservancy system is still in existence, and particularly those areas where drainage facilities are available.

The sanitary conveniences provided at the instance of the Public Health officials are detailed in the following pages, and indicate that during the year 117 water-closets, besides a considerable number of bathrooms, sinks, &c., were introduced to existing properties.

Biggar.—1 water-closet—1 water-closet at Biggarshiels Lodge.

Carlisle.—42 water-closets—2 water-closets for 5 tenants at Munro's Buildings, Law; 2 water-closets for 6 tenants at Orchard Street; 2 water-closets for Thomas Hamilton at Kirkton Street; 3 water-closets for 10 tenants at Milton Row; introduction of water-closet and wash-hand basin, 2 washtubs with water laid on to washhouse for Mrs. Twaddle, Kirkton Street; 1 water-closet for 3 tenants at Needle Row; bathroom and water-closet for one house and water-closet for adjoining house for Miss Dick, Kirkton Street; 1 water-closet for 2 tenants for Alexander Brooks, Kirkton Street; scullery, sink, washtub, and water-closet for James Ramsay, Kirk Road; 8 water-closets and 14 sinks for 14 tenants for Thomas Grossart at Stewart Street; 2 water-closets for 5 tenants for S. Hamilton, Cassels Street; 8 water-closets for 8 houses at Fairview, Law; 1 water-closet for 2 tenants at Stewart Street (for Co-operative Society); 2 water-closets for James Weir, Hamilton Street; 1 water-closet for Archibald Gardiner, Carnwath Road; 1 water-closet for 2 tenants for John Leishman, Stewart Street; 1 water-closet for Albert Young, Dykehead Road; 1 water-closet for Mrs. Weir, Hamilton Street; 2 water-closets for 4 tenants at 17-23 Kirk Road.

Carnwath.—5 water-closets—bath, water-closet, and sink for William Prentice, Carnwath; 1 water-closet and 1 sink for Arnold Hathaway, Carnwath; 1 water-closet for Robert Dewar, Carnwath;

water-closet, sink, and coal cellar for Robert Gibson, Forth; bath, water-closet, and washhand basin for Andrew Greenhorn, Rootpark, Wilsontown

Carstairs Village.—21 water-closets—3 water-closets for 8 tenants for James Walkinshaw; 1 water-closet for W. Sutherland; 3 water-closets for 3 tenants for John Boyd; scullery, coal cellar, water-closet, sinks, and washtub for Ninian Noble; 1 water-closet and sink for Mrs. Coke; 1 water-closet for Walter Wilson; 1 water-closet and 2 sinks for Co-operative Society; 1 water-closet and sink for John Gray; scullery with water-closet, and sink for John Wilson; 4 water-closets for 8 tenants at Commercial Buildings and 1 water-closet at Old Post Office for Mr. A. P. Gray; 1 water-closet and sink for James Watson; 2 water-closets with water to washhouse for J. W. Spence.

Crawford.—3 water-closets—1 water-closet at Bethel House, Leadhills; bath, water-closet, and sink at Gowanbank, Leadhills; 1 water-closet and sink at Ramsay Place, Leadhills.

Crawfordjohn.—2 water-closets.—Porch, water-closet, and coal-cellar at Meadowbank, Abington; 1 water-closet at the Smithy, Abington.

Douglas.—4 water-closets—3 water-closets for 7 houses at Bluetower and Bellsynd; bath, water-closet, and washhand basin at Midtown Farm, Douglas.

Lanark.—4 water-closets—Introduction of water-closet for Mrs. Grant, Hyndfordbridge; 1 water-closet and 3 sinks for 3 houses for Mr. O'Hearn, Kingson's Knowe; water-closet and 3 sinks for 3 houses for Mr. O'Hearn, Kingson's Knowe; water-closet and 3 sinks for 3 houses for James Robson, Kingson's Knowe; water laid on to property for John Cuthbertson, Kingson's Knowe.

Lesmahagow.—33 water-closets—Conversion of 8 privies into 8 water-closets at Pretoria Terrace, Coalburn; introduction of water-closet for Mr. Robert Carvel, Kirkmuirhill; 2 water-closets and 1 sink for 3 houses, Myrtle Cottage, Coalburn; bath, water-closet, &c., for William Tweedie, Southfield; 2 water-closets for 6 houses at Turfholm, Lesmahagow; 2 water-closets for 8 tenants at Biggarseat, Kirkmuirhill; 1 water-closet at Holm Road, Crossford; bath, water-closet, &c., for James Steele, Sunnybrae Cottage, Coalburn; bath, water-closet, &c., at Gall Cottage, Coalburn; 1 water-closet at Allandale, Coalburn; 1 water-closet for James Hearty, Auchenheath; 1 water-closet for Archibald Ferguson at Braehead, Coalburn; 1 water-closet and sink at Waddell's Property, Coalburn; 4 water-closets for 12 tenants at Thornton Place, Kirkmuirhill; introduction of 4 water-closets to 4 temporary houses at Lesmahagow, wash-house and 2 water-closets at Moorcroft's Buildings, Kirkfieldbank.

Libberton.—1 water-closet—bath, water-closet, and washhand basin at Burnfoot Farm, Quothquan.

Symington.—2 water-closets—bathroom, water-closet, and washhand basin for Mrs. Irvine, Symington; bathroom, water-closet washhand basin at Symington Mill.

WATER SUPPLY.

Special Water Supply Districts.

The number of special water supply districts remains at 16, no new areas having been formed during the year under review.

The special water supply districts comprise the following :—
Blackwood, Braidwood, Carluke, Carnwath and Carstairs Junction, Carstairs Village, Crawford, Crossford and Hazelbank, Douglas, Forth, Kirkfieldbank, Law, Lesmahagow and Coalburn, Ponfeigh, Robertson, Symington, and Thankerton.

Of the above-mentioned water districts, 11 are either wholly or partly supplied from the trunk pipes owned by the Burgh of Motherwell and Wishaw and the Middle Ward District Committee.

For particulars of assessment, see page 135.

The following is a statement of the rainfall for the past ten years as recorded at Coldstream Reservoir, Carluke :—

Year.						Rainfall in Inches.
1915,	-	-	-	-	-	32·05
1916,	-	-	-	-	-	48·30
1917,	-	-	-	-	-	34·35
1918,	-	-	-	-	-	34·75
1919,	-	-	-	-	-	31·85
1920,	-	-	-	-	-	38·75
1921,	-	-	-	-	-	39·70
1922,	-	-	-	-	-	30·15
1923,	-	-	-	-	-	38·65
1924,	-	-	-	-	-	31·90

Average for the ten years, 36·05 inches.

In recent Annual Reports all the special water supply districts have been fully reported upon, and it is therefore proposed at this time to deal only with those areas which have experienced shortage of supply and those in which improvements have been carried out or are contemplated.

Blackwood.—Mention was made in the previous report of certain recommendations which related to alterations in the distributing pipes, with a view to improving the supply to various parts of the district from which there had been complaints of scarcity.

These works were duly carried out, and a marked improvement has been effected.

At a recent meeting the local Water Committee gave instructions that any additional springs at Starbirns which could be made use of to augment the present supply should be measured and samples taken for analysis so soon as the weather permitted of this being done.

Braidwood.—During the year it was reported that, since a new water pipe was laid alongside Gallowhill Road, the water supply to Mayfield Row had been deficient, owing to the smallness of the pipe from the point where the new pipe terminated.

The District Engineer was instructed to extend the new pipe, and a 3-inch pipe was laid from the point left off some time ago with satisfactory results.

Carluke.—In the course of the year a 3-inch extension of the water pipes in Burn Road and Sandy Road was laid, so as to provide a supply for the 28 houses presently being erected in that vicinity.

There were also carried out alterations and extensions on the distributing pipes at Clyde Street and at Victoria Avenue, in order to serve the needs of the several new houses recently built there.

In order to facilitate the introduction of modern sanitary conveniences, a 2-inch water pipe was laid from Rankine Street to the head of Middlegreen property. As the main water pipe in Rankine Street originally extended along about half its length only, necessitating several tenants carrying their domestic water supply from a standpipe some considerable distance away, the local Committee also arranged to have this pipe extended for a further distance of about 40 yards, so as to facilitate the introduction of sinks, &c.

On the instructions of the local Water Committee I inspected two suggested additional sources of supply, viz. :—(1) an opencast on the lands of Gateside Farm, near Kilncadzow; and (2) a spring situated in a field on Leamuir Farm, Carluke. It was thought that, if these sources provided water of sufficient purity, they might be utilised to augment the present Carluke supply. Samples were procured and submitted to the County Medical Officer for analysis. The Analyst's report showed, in the case of sample No. 1, "These results afford no evidence of organic contamination. Amount of mineral salts, as indicated by the hardness, renders this water totally unfit for domestic purposes"; and No. 2, "These results afford no evidence of organic contamination. This water is, however, totally unfit for domestic purposes on account of excessive hardness."

Carnwath and Carstairs Junction.—Several complaints were received from the tenants of the houses on the west side of the railway bridge at Carstairs Junction Station as to the intermittent nature of the supply there. Everything was done by the officials to manipulate the valves so as to regulate the supply from this part of the district, but this was not altogether effective, and the Committee resolved to have an additional 4-inch pipe laid from the Motherwell main to a point at the junction of the Pettinain Road at Clydeview. It is hoped that when this work is completed an ample supply will be available for all parts of the district.

Carstairs Village.—An application was received from the Trustees of the R.C. Archdiocese of Glasgow, who recently purchased Carstairs House with a view to converting it into a home for mentally defective children, for a gravitation supply of water from the Committee's main pipe in Carstairs Village. The supply was granted, the applicants having to bear the cost of making connection, installing meter, &c. The supply is to be charged at the rate of 1s. per 1,000 gallons, with a minimum annual charge of £50, and the supply is to be continued only so long as the Committee can give off same without prejudicing the supply to the special water supply district.

Crossford and Hazelbank.—The work of laying on the gravitation water supply to the afore-mentioned villages was completed in the course of the year. On previous occasions when the Committee proposed to introduce this supply the scheme was vetoed, but I am sure that, now that the work has been carried through, every householder in the district is more than satisfied that the improvement was a much-needed one.

Douglas.—In connection with complaints that had been made regarding the shortage of supply to the new houses at Welldale, the following alterations and extensions were recommended by the District Engineer:—(1) that a new 4-inch pipe be laid along Springhill Road to the junction of the Lanark Road; (2) that the existing 3-inch pipe be disconnected from the lower portion of the town supply, and that the existing pipe be left to supply the new houses and also the properties situated at Braehead; (3) that the new pipe be connected to the town supply at the head of the Loaning.

This work was agreed to and has been carried out.

The question was also considered of replacing the 2-inch main at the top of Main Street, for a distance of 50 yards or thereby, with a 3-inch cast-iron pipe, so as to make this uniform with the other pipes in the district. This work was duly resolved upon and carried out.

Forth and Wilsontown.—The Committee had under careful consideration the augmenting of the supply for Forth and Wilsontown, rendered necessary owing to the increasing demands due to the erection of 98 houses under the state-aided housing schemes.

Several suggested sources of supply were inspected, but eventually it was agreed to arrange for the introduction of a supply from Lambcatch Spring on Wilsontown Moor.

The information available showed that on the dates of visit (18th and 20th March), after a very long period of drought, and when the surface water runners were entirely dry, the measurement of the main spring and of a subsidiary spring amounted, together, to 26,000 gallons in the 24 hours.

Samples of the water were procured for analysis, and the report from the County Laboratory showed that the water was of great purity, and only required the removal of the suspended matter to make it a satisfactory domestic supply.

The Committee negotiated with the Agent for the Rt. Hon. Lord Chilson, proprietor of Haywood Estate, with a view to acquiring this water supply, and eventually the site for the service reservoir and the water rights were acquired for the capital payment of £130.

At the close of the year these works were being overtaken.

Areas Outwith Special Districts.

Boghead.—Representations having been made with regard to the provision of a proper water supply for Boghead Village, it was agreed that a public supply of water was required, and that same could probably best be provided by including this area in Blackwood Special Water Supply District and supplying same from the Blackwood main pipe from Starbirns. It was thought, however, that the inhabitants should be given an opportunity of submitting a requisition on the subject, but so far no requisition has come to hand.

Samples of Water taken for Analysis.—10 samples of water were forwarded to the County Chemical Laboratory for examination. The results of analyses are referred to in the report of the Medical Officer of Health.

DRAINAGE.

Special Drainage Districts.

There are 13 Special Drainage Districts in the Upper Ward District, no increase falling to be reported from last year. These comprise the following:—Blackwood and Auchenheath, Braidwood, Carluke, Carnwath, Carstairs Village, Coalburn, Crosslaw, Douglas, Law, Lesmahagow, Ponfeigh, Symington, and Thankerton.

Blackwood.—Towards the close of the year the local committee had under consideration the question of extending the sewer so as to catch up the drainage from several properties presently unprovided for in the Blackwood district, and a report submitted by the District Engineer recommended that the following works be carried out:—(1) That a 9-inch sewer be laid from Southfield Inn and carried along the Carlisle Road to join the existing sewer at Blackwood Cross; (2) that an 8-inch sewer be laid from the culvert past the north-east boundary of the school, and thence carried underneath the railway to the road leading to Fence Terrace; (3) that an 8-inch sewer be laid from a point on the last-mentioned sewer, following a course through garden ground, past the old sawmill, thus providing drainage for the lowest house in the area.

Alternative methods of disposal of the sewage were suggested, viz.:—(1) To discharge the sewage direct into the culvert; or (2) to provide a septic tank which would deal effectively with the sewage.

The latter alternative was adopted, and it is hoped that this work will be proceeded with at an early date.

Carluk.—During the year various extensions were made to the existing sewers, in order to provide drainage facilities for the Committee's housing scheme at Sandy Road, as well as for the feuing ground at Victoria Avenue which is readily being taken up for the larger type of house.

In order to intercept a small outfall from Crawforddyke Street, which discharged into a ditch and was a source of pollution, the Committee instructed the Engineer to construct a sewer to discharge into the existing sewer at John Street, Old Bridgend.

In view of the frequency of complaints regarding pollution to Jock's Burn from the sewage irrigation fields, the Engineer was instructed to provide a septic tank near the railway bridge. This tank, which measures 70 feet by 20 feet, was completed early in the year, and there is a marked improvement in the resultant effluent to the burn.

Carnwath. — An extension to the existing drainage scheme at Carnwath was carried out so as to provide drainage facilities for the 12 new houses presently being erected on the Committee's site.

Carstairs Village.—This special district was formed on 1st August, 1923, and is co-extensive with the special water supply district.

A septic tank, in two sections, measuring over all 16 feet by 12 feet by 5 feet deep, and a sludge pit have been provided, and the effluent is discharged to the Flush Burn. Ground is also available for filters should these be found necessary.

A large number of the property owners in the village have already availed themselves of the opportunity of making connections to the new sewer, and it is very gratifying to note the large number of water-closets, sinks, &c., that have been introduced. At the close of the year the tradesmen had orders to proceed with several others.

Coalburn.—Owing to complaints by the ratepayers in the Bellfield area of the special district, as to their paying drainage rates without receiving any benefit from the inclusion of their properties in the special district, the District Engineer was asked to report upon the works necessary to drain that area, and it was agreed to proceed with the work recommended by him with that object.

Practically all the houses are now provided for.

Douglas.—When the Committee's houses were erected at Welldale, Douglas, the house connections were all made to an existing sewer originally laid from the slaughterhouse, but eventually this was found to be incapable of dealing with all the drainage, and the local Committee instructed the Engineer to provide a 9-inch sewer along Springhill Road to meet the increased demands.

Lesmahagow. — Birkwood Castle having been acquired by the Lanark Board of Control for the treatment of juvenile mental defectives, and the existing drainage being discharged into a small tank and thence to the River Nethan, it was resolved to provide a new system of drainage and to connect this up to the sewer at Turfholm.

Ponfeigh. — An extension of the sewer was made to provide facilities for the new housing scheme.

The septic tank originally measured 7 feet 6 inches by 6 feet 6 inches. This has been increased in size, now measuring 20 feet by 16 feet, and is capable of dealing effectively with all the sewage. A sludge pit has also been provided.

Symington.—The following is a copy of a report by the Interim County Medical Officer of Health and the District Sanitary Inspector regarding the sanitary conditions at Symington, which referred mainly to the lack of drainage facilities:—

With reference to the anonymous communication received by the Scottish Board of Health, dated 26th November, regarding the sanitary conditions of the village of Symington, an inspection was made yesterday, 11th December, and we beg to report in accordance with the Board's request, as follows:—

The population of the village of Symington is estimated at 400, and the number of the occupied houses, according to the Valuation Roll, amount to 107.

Symington was formed into a special water district in the year 1912. The supply is obtained from St. John's Kirk, about 1 mile distant, and the supply is at all times plentiful and of excellent quality.

A special drainage district was formed in 1914, but on account of the high cost of both labour and material the scheme has not so far been proceeded with.

Symington is not a special scavenging area, the scavenging being carried out by the owners. The village is situated in an agricultural district, and as there is a demand for the coarser sorts of manure there is no difficulty in getting the ashpits emptied.

It has to be explained that in a number of houses there is no water supply inside the dwellings owing to the lack of drainage facilities, but there is a water supply convenient to all the properties, although it has to be carried either from the wash-house or from a standpipe in the street, but in every case the supply is within reasonable distance from the dwelling.

We may state that at present there is no nuisance that could be dealt with under the Public Health statute, but there is no doubt as to the desirability of having all modern sanitary conveniences. The whole question is one of cost. The District Committee might now feel disposed to re-open the question of proceeding with the drainage district, and, should that be decided upon, we do not think there will be any difficulty in getting the owners of the property in the village to meet the demands.

At the close of the year the Committee had the matter in hand.

In the Annual Report for the year 1922 the following recommendation appeared, "In view of the fact that, in several of the special drainage districts in the Upper Ward, suitable purification works have been installed, it is desirable that the services of a man be obtained in each area to see that the grit chambers are cleaned out regularly, to regulate the flow during stormy weather, and otherwise to ensure that everything is kept in good working order."

This suggestion has been acted upon, and officers are now in attendance when necessary at the following schemes:—Coalburn (2 tanks); Lesmahagow (1 tank); Ponfeigh (1 tank); and Carluke (1 tank).

Other than Special Districts.

Crossford.—Now that Crossford has been provided with a gravitation water supply, the question of efficient drainage arises. The existing drains are very old and give a good deal of trouble, one particularly, a stone-built drain which passes underneath the gardens fronting a number of cottages. This drain was silted up during the latter part of the year and the owner of each property was communicated with requesting that they should bear their share of clearing that part of the drain passing through their ground.

It would be a decided sanitary improvement to have proper drainage facilities provided for the village of Crossford.

Hazelbank.—Hazelbank is included within the boundaries of Crossford Special Water Supply District. The drainage from all the houses on the high side of the road is discharged into an open ditch which runs down the side of the public road.

Now that there is sufficient water to flush a jointed drain, it would be a decided sanitary improvement to have this ditch piped in.

Leadhills.—Glengonnar Burn passes through the centre of the village, and not only receives all the sewage but also the lead-washings from the mines. The latter causes the bed of the burn to be silted up, which necessitates periodical cleaning. The manager of Leadhills Mining Company was approached with a view to having the bed and sides of the burn laid with concrete from the point where the outfall from the washery at the mines is discharged. The company have instructed the manager to have this work carried out in the early spring. The Local Committee are also considering the question of treating the upper part of the burn in a similar manner.

SCAVENGING.

Special Districts.

There are 13 special scavenging districts in the Upper Ward area, this number remaining the same as last year.

The following is a list of the special scavenging districts:—Blackwood and Kirkmuirhill (which includes Auchenheath), Carluke,

Carnwath, Carstairs Junction, Carstairs Village, Crosslaw, Douglas, Forth and Wilsontown, Haywood, Law, Leadhills, Lesmahagow, and Ponfeigh.

As each special district was dealt with at length in last year's Annual Report it is not necessary on this occasion to go into detail. It might be mentioned, however, that, in 4 of the special scavenging districts enumerated above, namely, Carluke, Douglas, Forth, and Lesmahagow, the Committee have provided their own horses and labour; while the scavenging in the remaining 9 areas is contracted for. The former arrangement has many advantages over the system of contracting.

The Public Health officials continue to press for the introduction of water-closets particularly in special scavenging districts, as this improvement makes it possible for ashpits to be discontinued and the more modern method of refuse collection adopted.

As will be seen from the information given under the Housing Section of this report, this work has met with a fair degree of success and many marked improvements have been effected.

LIGHTING.

Special Lighting Districts.

There has been no addition during the year 1924 to the number of special lighting districts enumerated in last year's Annual Report; this number remains at 5, and comprises the following areas:—Carlukc, Crosslaw, Douglas, Law, and Lesmahagow.

While the village of Law has been formed into a special lighting area, the Committee has not yet found it possible to give any facilities pending a definite arrangement regarding the introduction of electric current.

Nothing of outstanding interest falls to be reported regarding any of the other special districts, a full service having been maintained throughout the lighting season.

SPECIAL DISTRICTS.

The special districts for the purposes of water supply, drainage, scavenging, and lighting are shown in the following table. The rates of assessment (half-proprietor, half-tenant) for the year 1924-25 are also shown. A blank in the assessment column means that no district has been formed for the special purposes indicated.

District.	Water.	Drainage.	Scavenging.	Lighting.	Total Assessment.
Blackwood,	2/1	2/3	4½d.	...	4/8½
Braidwood,	21½d.	6d.	...	...	1/5½
Carluke,	1/-	6d.	4½d.	5½d.	2/4
Carnwath,	1/4	1/-	4½d.	...	2/8½
Carstairs Junction, ...	1/4	....	4½d.	....	1/8½
Carstairs Village, ...	1/8	3/1	1/-	....	5/9
Crawford,	1/6	....	....	....	1/6
Crosslaw, ... ..	...	1d.	2/4d.	4d.	7·4d.
Douglas,	1/1	3½d.	7d.	3½d.	2/3
Forth,	3/3	....	8½d.	...	3/11½
Haywood, ... ..	...	...	10½d.	...	10½d.
Kirkfieldbank,	1/7½	...	...	...	1/7½
Law,	5½d.	3d.	3d.	*	11½d.
Leadhills, ... ..	...	...	6d.	...	6d.
Lesmahagow,	1/0½	1/1½	7½d.	3½d.	3/1
Coalburn,	1/0½	3/1	...	...	4/1½
Ponfeigh,	1/9½	4½d.	8d.	...	2/10
Roberton,	2/-	...	....	...	2/
Symington,	1/3	*	...	...	1/3
Thankerton,	10d.	3½d.	....	....	1/1½

* District formed but not yet in operation.

NUISANCES.

83 complaints were received in the course of the year. The subject of complaint in each case was carefully enquired into and, where necessary, steps were taken to secure the discontinuance or abatement of the nuisance.

In addition to these a great many inspections were made with a view to the detection of nuisances, and as a result 133 intimations were served upon the authors under Section 19 of the Public Health (Scotland) Act, 1897.

While in many instances the existence of nuisances was brought to the notice of the authors verbally and remedial measures were undertaken without further intimation, it was found necessary in 3 instances to have Statutory Notices served upon defaulting authors, in terms of Section 20.

In one instance, the owners carried out the necessary improvements, while the other 2 cases were still pending at the close of the year.

COAL MINES ACT, 1911.

No intimations were received in the course of the year from H.M. Inspector of Mines regarding the abandonment or discontinuance of any mine in the district.

PUBLIC AND PRIVATE SLAUGHTERHOUSES.

There are in the Upper Ward District 4 public and 7 private slaughterhouses, the latter including a large sheepery.

The public abattoirs are situated in Carluke, Douglas, Forth, and Lesmahagow, and the private slaughterhouses in the following areas:—Abington, Carnwath, Carstairs Junction, Crawford, Douglas Water, Leadhills, and Symington.

All the slaughterhouses within the district were regularly visited and with few exceptions were conducted in accordance with the By-laws.

The following tables give a record of (a) the animals killed and dues collected; and (b) the carcasses totally destroyed or partially condemned during the year in the various public abattoirs.

RECORD OF ANIMALS KILLED AND DUES COLLECTED DURING 1924.

Slaughter-house	Bulls	Bullocks	Cows	Heifers	Calves	Sheep	Swine	Totals	Dues Collect
Carluke, - -	8	604	149	126	2,120	928	3,247	7,182	£265 5
Douglas, - -	2	196	...	8	1	287	13	507	41 2
Forth, - - -	...	179	...	98	3	246	82	608	53 18
Lesmahagow,	18	313	371	56	4	690	220	1,672	147 16
Totals, -	28	1,292	520	288	2,128	2,151	3,562	9,969	£508 2

CARCASSES TOTALLY OR PARTIALLY CONDEMNED DURING THE
YEAR 1924.

		CATTLE.				CALVES.		SHEEP.		SWINE.			
Slaughter-house		Complete Carcases	Part Carcases	Heads	Internal Organs	Complete Carcases	Internal Organs	Internal Organs	Complete Carcases	Part Carcases	Heads	Internal Organs	
Carlukc,	-	26	14	25	102	14	8	1	9	1	83	88	
Douglas,	-	...	...	...	...	...	...	...	...	...	...	...
Forth,	- -	...	1	2	3	...	...	...	...	...	..	...
Lesmahagow,		5	8	3	6	...	...	...	...	...	...	...
Totals, -		31	23	30	111	14	8	1	9	1	83	88	

Public Health (Meat Inspection) Regulations (Scotland), 1923.—

In the month of April, 1924, a letter in the following terms was addressed to the District Clerk:—

“As you are aware, the Scottish Board of Health recently issued the Public Health (Meat Inspection) Regulations (Scotland) 1923, with schedules of instructions as to methods of inspection, &c.

“Under the above Regulations the Board now require a return showing (1) the number of animals slaughtered; (2) the number of carcasses inspected; and (3) the number and weight of the carcasses seized.

“I might mention that hitherto in the public abattoirs in the Upper Ward we have had no means of weighing carcasses, but the Committee might now consider the desirability of introducing suitable apparatus in order that this information may be easily available in the future for the Board's returns.

“CARLUKE ABATTOIR.—In view of the large volume of work done and the added requirements of the Board of Health, the Committee might consider the desirability of extending the premises so as to provide the following additional accommodation, viz., cooling-room, condemned-meat room, and suitable weighing facilities. At present the killing booths serve also as hanging or cooling rooms and a good deal of congestion occurs, particularly during the first three days of the week.

“These premises are particularly well adapted for such an extension.

“Should the Committee entertain this proposal I might mention that the butchers would be likely to take full advantage of the facilities for weighing of carcasses, &c., and a small fee could be charged in each case.

“LESMAHAGOW ABATTOIR.—There is a fairly large amount of business done here and the accommodation available is sufficient for the requirements of the district. It is desirable that suitable apparatus be installed here also.

“DOUGLAS AND FORTH ABATTOIRS.—The business done at these two public abattoirs is comparatively small and some form of spring balance might prove sufficient to meet the requirements here.”

At the close of the year the question of extending Carluke Abattoir and providing suitable chill-room accommodation with condemned-meat room, weighing apparatus, &c., was under consideration.

Public Health (Meat) Regulations (Scotland), 1924.—Section 6 of the above Regulations require that—

“A Local Authority granting a licence under Section 33 of the Public Health (Scotland) Act, 1897, for the use of premises as a private slaughterhouse, shall specify in such licence the days and hours on and within which cattle or swine may be slaughtered at the slaughterhouse to which the licence refers, &c.”

The views of the various tradesmen interested were sought, and an indication asked as to suitable days and hours for slaughtering.

Following upon their replies, setting out their difficulties in fixing days and hours, especially during the summer months, the matter was taken up with the Medical Officer (Foods) to the Scottish Board of Health when it was pointed out by him that “Article 6 of the New Meat Inspection Regulations which stipulates that the Local Authority shall specify in such licence the days and hours on and within which cattle or swine may be slaughtered, was devised to meet the recommendations of the Advisory Committee to deal with the very point that you suggest, viz., the slaughtering of animals at all hours of the day and night on every day of the week.”

Licences are due for renewal in the month of May of each year, and it will be necessary for the Local Authority in granting the renewal of licences to specify thereon the days and hours upon which slaughtering may be carried out.

For the present arrangements have been made for the butchers holding private licences to make a weekly return showing the days and hours upon which slaughtering takes place, and the premises are visited as frequently as possible.

The following table gives a record of the animals slaughtered at the undermentioned private slaughterhouses.

PRIVATE SLAUGHTERHOUSES.

RECORD OF ANIMALS KILLED DURING THE YEAR 1924.

	Bullocks.	Heifers.	Calves.	Cows.	Sheep.	Swine.	Total
Abington,	56	18	21	—	203	45	343
Carnwath,	85	13	—	—	148	2	248
Carstairs Junction,	194	—	—	—	320	70	584
Crawford,	63	—	—	—	193	12	268
Douglas Water, ...	116	2	—	—	219	3	340
Leadhills,	16	43	3	3	111	—	176
	530	76	24	3	1,194	132	1,959

CONDEMNATION.

Slaughterhouse, Douglas Water, 1 liver (bullock).

Sale of Meat or Meat Food Products.—Article 12 of the Regulations which has been adopted by the Local Authority provides, *inter alia*, that—

“No person other than a person keeping open shop for the sale of meat or meat food products shall, by himself or by any other person employed by him, sell or offer or expose for sale any meat or meat food product from any cart or other vehicle or from any basket, barrow, booth or stance unless he holds a certificate from the Local Authority of the District in which the accommodation used by him for the storage of the meat or meat food products is situate, approving such accommodation.”

Certificates approving of such storage accommodation will be issued in the month of May of each year.

UN SOUND FOOD.

On 22nd July a consignment of 14 kegs of fruit which had been considerably delayed in transit was seized and destroyed with the owners' consent as being unfit for human food.

OFFENSIVE TRADES.

Two businesses are conducted under this category in the Upper Ward District. These are (1) knacker's yard at Whitelees, Lanark; and (2) bone-degreasing plant at Braidwood.

Knacker's Yard.—A further complaint was received regarding the polluted condition of the burn into which the drainage from this business is discharged.

The complainers alleged that the pollution was caused by animal matter discharged into the burn from this source, and that, during warm weather, offensive odours emanated therefrom.

The Public Health Committee appointed a deputation to visit the *locus* along with the officials, and it was agreed, after a careful inspection of the knackery premises and the burn complained of, to request the licence-holder to proceed with the construction of a small tank as previously arranged for so as to eliminate, as far as possible, pollution of the burn.

REPORT BY THE DISTRICT SANITARY INSPECTOR ON ALLEGED
POLLUTION OF BURN ON LANARK GOLF COURSE.

With reference to the complaint from the Hon. Secretary of the above Company regarding the recrudescence of the noxious smell on the Golf Course, I beg to make the following report:—

Visits of inspection were made to the Golf Course on Saturday, 31st May, on Monday, 9th June, and on Friday, 13th June, and the conditions existing on these dates were as follows:—

31st May.—On proceeding over the Golf Course no noxious smell was observed. The ditch passing through the Golf Course, which receives the whole of the drainage from the old oil works and houses, including Steven's knackery, was next visited. The ditch in its entirety was found to contain at certain places masses of sewage fungus growths, though the water in the ditch was running perfectly clear. No odour could be detected from the burn.

The outfall was inspected and the discharge coming from it was perfectly clear. Fungus growths were again apparent here.

On visiting the premises of the Knackery it was found that there was a large accumulation of dead meat, and the proprietor explained that this was due to the recent fire at a farm near Biggar, from which he had been called upon to remove 14 carcasses. Owing to these carcasses having been burnt it was more difficult to render the flesh in the digester.

It was impressed upon him that he must deal quickly with this accumulation of flesh.

The plant was inspected and found to be working satisfactorily.

9th June (forenoon).—The Golf Course was again visited and no noxious smell was detected. On visiting the ditch it was found to be in a bad condition. Along with the greenkeeper, the whole length of the ditch was inspected. The water running in the ditch was of a dirty white appearance, and large masses of sewage fungus were observed.

The outfall was inspected, and the water discharging into the ditch was found to be of the same colour as seen further down the ditch. On observing the discharge for some time it was noted that many particles of what appeared to be sewage growths came from the pipe. This, the greenkeeper stated, had continued from the early morning.

On enquiry from the greenkeeper as to his experiences of offensive smells on the Golf Course, he explained that at intervals he had detected a bad smell arising from the ditch, and also on occasions the smoke from the knackery furnace was offensive.

The knackery was next inspected, and it was found that the accumulation of flesh had considerably diminished. On enquiry from the proprietor regarding a report that on one day towards the end of the week smoke emanating from the knackery furnace was most offensive, he admitted that, through a mistake on the part of one of his men, the fire had not been properly stoked, thus allowing some of the vapour from the digester to pass through unburned.

The plant appeared to be working satisfactorily at the time of visit.

13th June (forenoon).—The ditch and the knackery premises were again inspected, and, with the exception of the sewage fungus in the ditch, the conditions were found to be quite satisfactory.

Action taken.—(a) Ditch.—Into this there drains (1) the drainage from Steven's knackery; (2) the drainage from 6 dwelling-houses, 4 of which have water-closets; and also a water-closet newly erected for the employees of the Shellmex Company; (3) the drainage from the cattle-truck siding. In the case of (2) and (3) septic tanks are provided, and the proprietor of the Knackery was strongly urged to put in a small septic tank. This work has been commenced.

(b) Knackery premises.—(1) The proprietor was urged to lose no time in getting the accumulated flesh put through the digester. This was done, and a marked improvement in the condition of the premises had been effected. (2) With regard to the furnace, the proprietor promised to give more attention to the efficient stoking of it. In addition, the proprietor proposed and was prepared to carry out the digesting of the flesh during the night in order to obviate as far as possible any emission of smoke during the daytime.

The Committee may consider it desirable to appoint a small Sub-Committee to inspect these premises and to consider, if necessary, any further action.

In this event proceedings would have to be taken under the Public Health (Scotland) Act, Section 16, and dealt with as a nuisance, as the Committee at present have no By-Laws regulating such a business.

The tank has now been installed, and it is hoped that there will be no further cause for complaint.

Bone-degreasing Plant.—This business continues to be conducted on up-to-date lines, and no complaint has been received.

SCHOOLS.

There are within the Upper Ward District 51 public schools. Periodical visits were paid to a number of these in connection with the occurrence of infectious sickness.

Plans were submitted and approved of for the erection of a new school and schoolhouse at Underbank, Crossford. Plans were also approved providing for the addition of a staff-room and lavatory at Leadhills School.

WORKSHOPS.

The registered workshops in the district, including bakehouses, numbered 274, and are classified as under :—

Dressmakers and Tailors, -	81	Milliners, - - -	5
Boot and Shoe Makers, -	38	Blacksmiths, - - -	39
Joiners and Cabinetmakers, -	50	Saddlers, - - -	4
Bakehouses, - - -	23	Miscellaneous, - - -	34

171 inspections were made. No notices were received from H.M. Inspector of Factories during the year.

DAIRIES, COWSHEDS, AND MILKSHOPS.

Milk (Special Designations) Order (Scotland), 1923.—The Local Authority granted licences to 9 farmers. 8 of these related to Grade “A” (tuberculin-tested), Producer’s Establishment, while 1 was Grade “A” (Producer’s Establishment) only.

At two of the farms producing Grade “A” (tuberculin-tested) milk the milk is also bottled on the premises.

A number of farms were visited and arrangements made for the improvement of byres in respect of ventilation, lighting, cubic capacity, &c.

VETERINARY INSPECTION OF DAIRY HERDS.

The number of herds inspected during the year 1924 was 188, comprising 4,265 cows.

Samples of milk were taken in certain instances for bacteriological examination, and the results of such examinations are dealt with by the Medical Officer of Health in his report.

DISEASES OF ANIMALS ACT, 1894.

9 Outbreaks of anthrax in cattle were reported to the Public Health Department by the Superintendent of Police for the district.

In each instance the infected farm was visited, and enquiries were made regarding the health of the inmates, but in no case was it deemed necessary to report any suspicious illness to the Medical Officer of Health.

BURIAL GROUNDS.

No complaint was received during the year regarding any burial ground in the district.

5 interments were carried out at the instance of the Local Authority under Section 69 (1) of the Public Health (Scotland) Act, 1897.

2 of the bodies were unclaimed, while in the remaining 3 instances no sufficient person undertook the burial on account of poverty. The sum of £2 17s. 10d. was recovered from an Insurance Company in respect of the unclaimed body of a man, who at the time of death was an inmate of Roadmeetings Sanatorium.

ACCOMMODATION FOR SEASONAL WORKERS.

During the course of the year 44 intimations of the intention to accommodate seasonal workers were received by the Local Authority in accordance with the By-Laws.

Each farm was visited, the premises to be occupied measured, and the farmer instructed as to the number of persons he could accommodate. Every farmer was furnished with a copy of the By-Laws.

On 22nd October a number of the farms where seasonal workers had been housed were visited by the Housing Inspector to the Scottish Board of Health, who later submitted a report to the Local Authority.

The report dealt in detail with each farm visited, and mentioned that, except in a few instances, the accommodation on the whole was reasonably satisfactory. The privy accommodation at several farms was insufficient however, the reason given by the farmers for the omission being that the accommodation available was seldom used and it was considered unnecessary to provide further accommodation on that account. It was also pointed out that intimations by the

farmers should be returned to the Local Authority not later than the last day of June. These intimations have not been coming in as they should, and in the majority of cases insufficient time was given in order to enable the premises to be inspected before the arrival of the workers. It might help matters if, early in the season, the Local Authority sent a copy of the form of intimation to all the farmers concerned.

The recommendations of the lady Housing Inspector will be kept in mind, and a form of intimation will be sent to each farmer who is in the habit of housing seasonal workers. At the same time attention will be directed to the more important provisions of the By-Laws, and failure on the part of any farmer to comply with the By-Laws will be reported to the Public Health Committee for further procedure.

INFECTIOUS DISEASES.

5,110 visits of enquiry were paid.

885 notices issued to headmasters.

507 houses or premises disinfected.

398 patients removed to hospital.

Fuller details as to infectious diseases will be found in the report of the Medical Officer of Health.

WILLIAM PATERSON,

District Sanitary Inspector.

COUNTY OF LANARK
DISTRICT OF THE UPPER WARD
(Including the Burghs of Biggar and Lanark)

Midwives (Scotland) Act, 1915

EIGHTH
ANNUAL REPORT

BY THE
MEDICAL OFFICER OF HEALTH

1924

The Medical Officer of every Local Authority shall report annually to that Authority of the administration of the Act within the District of that Local Authority, and he shall transmit a copy of such report to the Central Midwives Board and to the Local Government Board for Scotland.—Section 23.

STAFF.

Administrative Officer.

J. HUME PATTERSON, F.R.F.P.S (G.), D.P.H.

Executive Officer and Inspector of Midwives.

ALEXANDER FRASER, M.D., D.P.H.

Nurse Health Visitors and Assistant Inspectors of Midwives.

(All hold the C.M.B. Certificate.)

HELEN MACGREGOR.

ANNIE H. BELL.

HELEN O. LOCHHEAD.

Practising Midwives.—*Upper Ward District.*—13 midwives notified their intention to practise in the Upper Ward District.

Burgh of Lanark.—2 midwives notified their intention to practise in the Burgh of Lanark.

Burgh of Biggar.—No midwives are practising in the Burgh of Biggar.

Both in the Upper Ward District and in the Burgh of Lanark these midwives are in *bona-fide* practice, and certified under the Act, though, however, many of them practise seldom by themselves, preferring to attend chiefly on doctors' cases.

Attendances at Confinements.—*Upper Ward District.*—The total number of births allocated to the district amounted to 1,119, of which 1,094 were registered in the district.

Notifications.—1,119 births were notified, of which 1,087 were live births and 32 still-births. From these notifications it was found that in 1,013 cases a medical practitioner was in attendance; in 93 a certified midwife; and in 13 an uncertified midwife. The percentage of births registered in the district which were attended by certified midwives was 8·3.

Burgh of Lanark.—After correction for transfers the number of births belonging to the Burgh was 136, of which 129 were registered in the Burgh.

Notifications.—150 notifications of birth were received, of which 146 were live births and 4 still-births. From these notifications it was found that in 130 cases a medical practitioner was in attendance; in 17 cases a certified midwife; and in 3 cases an uncertified midwife. The percentage of births registered in the Burgh which were attended by certified midwives was 11·3.

Burgh of Biggar.—After correction for transfers the number of births allocated to the Burgh was 16.

Notifications.—19 notifications of births were received, of which 2 were still-births. All were attended by medical practitioners.

Still-births.—In the Upper Ward District 32 still-births were notified. In 30 of these cases a medical practitioner was in attendance, and in 2 cases a certified midwife.

In the Burgh of Lanark 4 still-births were notified, all of which were attended by a medical practitioner.

In the Burgh of Biggar 2 still-births were notified, both being attended by a medical practitioner.

Inspection of Midwives.—Upper Ward.—The routine inspections made during the year showed that the personal conditions were satisfactory in 5 cases, and fair in the remainder. A register was kept in 12 instances, 1 midwife attending only doctors' cases, while 1 left the district during the year.

Puerperal Septicæmia.—Upper Ward.—During the year 3 cases were notified. Each case was of a serious nature, and removed to the County Hospital, Motherwell.

No cases occurred in the Burghs of Biggar and Lanark.

Ophthalmia Neonatorum.—Upper Ward.—During the year 3 notifications were received. All cases were notified by the medical practitioner in attendance. Visits were made by the Nurse Health Visitor, and the cases were classified as mild. All cases made complete recovery, with no impairment to vision. 1 case was removed to County Hospital, Motherwell.

Burgh of Lanark.—No cases were notified during the year.

Burgh of Biggar.—No cases were notified during the year.

Medical Assistance.—Upper Ward.—No notification of the calling in of medical assistance was received during the year.

Liability to be a Source of Infection.—1 notification was received.

Form of having Laid out a Dead Body.—No notifications were received.

Form of Notification of Still-birth.—No notifications were received.

Offences.—Nil.

BURGH OF BIGGAR

(Area, 62 Acres)

REPORT

OF THE

MEDICAL OFFICER OF HEALTH AND OF
THE SANITARY INSPECTOR

1924.

Report of the Medical Officer of Health.

Statistics.

The **population**, as estimated to the middle of the year 1924, was 1,400.

The **births** registered in the Burgh amounted to 17, and after correction for transfers numbered 16—males, 9; females, 7—giving a birth-rate of 11·4 per 1,000 of the population. Of these births 1 was illegitimate, giving an illegitimate rate of 6·2 per 1,000 births.

The **deaths** registered in the Burgh numbered 21, and after correction for transfers amounted to 28—males, 16; females, 12—giving a death-rate of 20 per 1,000 of the population.

The following table shows the cause and age periods at death:—

Cause of Death.	1-	5-	10-	25-45	45-65	65 and over.	Total.
Scarlet Fever, - -	2	1	—	—	—	—	3
Influenza, - - -	—	—	—	—	2	2	4
Other Septic Diseases, -	—	1	—	—	—	—	1
Abdominal Tuberculosis,	1	—	—	—	—	—	1
Malignant Diseases, -	—	—	—	—	2	1	3
Meningitis (simple), -	—	—	1	—	—	—	1
Cerebral Hæmorrhage, -	—	—	—	—	—	2	2
Organic Heart Disease, -	—	—	—	—	—	4	4
Bronchitis, - - -	—	—	—	—	—	2	2
Pneumonia, - - -	—	—	—	1	1	—	2
Other Defined Diseases, -	—	—	—	—	—	5	5
Total, - - -	3	2	1	1	5	16	28

Prevalence of Infectious Disease.

Notifiable Diseases.—11 cases of infectious disease were notified, being an increase of 5 in comparison with the number notified during the previous year. The notifications were as follows:—Scarlet fever, 6; diphtheria, 3; acute primary pneumonia, 1; influenzal pneumonia, 1. The cases removed to hospital numbered 7—scarlet fever, 5; diphtheria, 2. The cases treated in hospital are as follows:—Burgh Fever Hospital, Lanark—scarlet fever, 4; diphtheria, 2. County Hospital, Motherwell—scarlet fever, 1. Visits of inspection were made to the homes where the cases occurred, and disinfection carried out. All precautions to prevent the spread of disease were taken.

Tuberculosis.—4 cases were notified during the year—pulmonary, 2; non-pulmonary, 2.

Institutional Treatment.—1 case was admitted during the year to the District Sanatorium, Roadmeetings.

Domiciliary Treatment.—During the year 1 case received domiciliary treatment.

Deaths from Tuberculosis.—1 death occurred from tuberculosis during the year—abdominal tuberculosis, 1.

Maternity and Child Welfare.

The Burgh is included in the Upper Ward Scheme. The District Nurse acts as Nurse Health Visitor for the Burgh and the surrounding County district.

Notifications of Births.—19 notifications were received, and the attendant at birth in each case was a medical practitioner. 2 still-births were notified by the medical practitioner in attendance.

Infantile Mortality.—No deaths of children under 1 year were recorded; thus the infantile mortality rate for the year is nil.

Necessitous Cases.—During the year assistance was granted to 1 case.

Hospital Treatment.—There were no admissions to hospital during the year.

Venereal Diseases.

The Burgh is included in the scheme of the Joint-Committee for the prevention and treatment of venereal diseases.

General Sanitation.

Water supply, drainage and sewage disposal, scavenging, and other matters are referred to in the report of the Sanitary Inspector.

Workshops.—These are dealt with in the report of the Sanitary Inspector.

Food and Drugs Act.—The County Council administer these Acts within the Burgh.

The **Public Slaughter-house** is situated outside the Burgh boundary. A record of the animals killed and dues collected is given in the Sanitary Inspector's report.

Report of the Sanitary Inspector.

The **water supply** for the Burgh is obtained from King's Beck Burn, situated about seven miles south of Biggar. The Council made their annual inspection of the inlet of the dam in the month of September last, and were satisfied that the supply was adequate for all purposes.

The **Drainage and Sewage Systems** are dealt with in two portions, east and west. The sewage from the latter, after passing through three settling tanks, is allowed to run in open channels, and spread over the most part of ten acres of land, the property of the Town Council. The east portion, passing through two settling tanks, is run in open channels over about six acres of land, which is owned by the Town Council.

The present system of sewage disposal continues to prove very satisfactory.

In connection with the **scavenging system**, the ashes and night soil from dry closets are removed on alternate days, that is on Monday, Wednesday, and Friday, from the west end of the Burgh, and on Tuesday, Thursday, and Saturday from the east end. On Friday there is a general collection of rubbish. The whole of the rubbish is deposited in a coup about one mile outside the Burgh.

During the year 3 water-closets have been erected, and the use of 2 dry closets discontinued.

1 new house was erected during the year within the Burgh.

Nuisances.—Several cases were dealt with during the year. After due notice having been given, they were removed by the owners or tenants, no legal proceedings being necessary.

The **High School** was visited frequently, and found clean and in good order.

Visits (34) of inspection were made to tents and living vans—local and temporary. These were found to be clean and tidy.

Cowkeepers and Sellers of Milk.—There are two cowkeepers within the Burgh. Inspections (28) were made, and the cowsheds, shops, and dairies were found in good order. 13 cows are kept.

Visits of inspection (30) were made to **pig-styes**, and all were found to be in good order.

Common Lodging-Houses.—There are none within the Burgh.

Burial Ground.—The burial ground is situated partly within the Burgh and partly in the County area. It is well kept. The grass is frequently cut, and a good supply of water is given by the permission of the Town Council.

Infectious Diseases.—The cases of infectious disease occurring in the Burgh are noted in the report of the Medical Officer of Health. Inquiries were made as to the source of infection, and frequent visits were made to the houses affected. Thorough disinfection of the houses and bedding was carried out.

Workshops.—There are 50 workshops in the Burgh. Visits of inspection (25) were made at different intervals. There are no underground workshops in the Burgh. The following is a list of the different workshops and the number of persons employed :—

NUMBER OF EMPLOYEES.						
Workshops.	No. of Shops.	Males.	Females.	Apprentices.	Total.	
Dressmaker and Milliners,	- 10	6	13	1	20	
Tailors, - - -	- 4	13	16	7	36	
Bakers, - - -	- 5	10	12	7	29	
Cabinetmakers, - - -	- 2	5	2	1	8	
Jewellers, - - -	- 3	4	1	1	6	
Harnessmakers, - - -	- 1	3	1	1	5	
Blacksmiths, - - -	- 2	4	—	2	6	
Shoemakers, - - -	- 5	9	3	1	13	
Laundries, - - -	- 2	—	4	—	4	
Engineers, - - -	- 5	14	1	2	17	
Plumbers, - - -	- 2	7	1	5	13	
Painters, - - -	- 3	11	—	4	15	
Joiners, - - -	- 4	13	—	4	17	
Total, - - -	48	99	54	36	189	

Slaughter-house. — The slaughter-house is situated outside the Burgh boundaries. Visits of inspection were frequent, and the premises were found to be kept in a clean and tidy condition. The record of animals killed (which included 15,924 slaughtered for the London markets) and the dues collected is as follows:—

Cattle.	Calves.	Swine.	Sheep.	Total.	Dues Collected.
724	223	469	31,207	32,623	£294 18s. 7d.

Record of Inspections made:—

Place.	Number of Inspections.
High School, - - - - -	30
Workshops, - - - - -	35
Tents and Vans, - - - - -	34
Cowsheds, Dairies, Milkshops, - - - - -	28
Pig-styes, - - - - -	30
Fish Shops, - - - - -	21
Slaughter-house, - - - - -	20
	<hr/>
	198
	<hr/>

WILLIAM M. SMITH,
Sanitary Inspector.

MIDDLE WARD.

Annual Report for 1924.

STAFF.

PUBLIC HEALTH DEPARTMENT.

MIDDLE WARD DISTRICT.

County and District Medical Officer—

J. HUME PATTERSON, F.R.F.P.S.(G.), D.P.H.

Tuberculosis Officers and Assistant M.O.H.—

J. M'CALLUM LANG, M.D., D.P.H.

JOSEPH R. SUTHERLAND, M.B., Ch.B., B.Sc., D.P.H.

JOHN A. C. GUY, M.B., Ch.B., D.P.H.

Assistant M.O. under Child Welfare Scheme—

HENRY J. THOMSON, M.D.

G. MACLEOD MILLAR, M.B., Ch.B.

Consulting District Sanitary Inspector—

JAMES DOBSON.

District Sanitary Inspector—

JOHN MILLAR.

Inspector of Buildings—

WILLIAM MARTIN.

District Meat Inspector, etc.—

ALEX. CAMERON.

LOCAL SANITARY INSPECTORS, &C.,	-	-	-	10
NURSE HEALTH VISITORS,	-	-	-	17
NURSE SANITARY INSPECTORS,	-	-	-	12
SUPERINTENDENTS OF SLAUGHTER-HOUSES,	-	-	-	7
ASSISTANT BUILDINGS INSPECTORS,	-	-	-	2

STAFF.

PUBLIC HEALTH HOSPITALS.

MIDDLE WARD DISTRICT.

Medical Officer—

J. HUME PATTERSON, F.R.F.P.S.(G), D.P.H.

<i>County Hospital, Motherwell,</i> (150 beds)	- -	Dr. JOHN REID, Resident Physician-Superintendent. Dr. THOS. HUNTER, Resident Assistant Physician. Miss M. THOMSON, Matron.
<i>Lightburn Joint-Hospital, Shettleston,</i> (60* beds)		Dr. J. S. M'LEAN GRAY, Resident Physician-Superintendent. Miss E. TOWNSEND, Matron.
<i>County Sanatorium, Stonehouse,</i> (60 beds)	- -	Dr. J. R. SUTHERLAND, Resident Physician-Superintendent. Dr. A. H. M'LEAN, Visiting Physician. Miss A. SHORE, Matron.
<i>County Sanatorium, Shotts,</i> (52 beds)	- -	Dr. JOHN A. C. GUY, Physician-Superintendent. Dr. J. M'MILLAN, Visiting Physician. Miss ISA KEIR, Matron.
<i>County Sanatorium, Uppertown,</i> (46 beds)	- -	Dr. J. M'CALLUM LANG, Physician-Superintendent. Dr. RICHARD RAE, Visiting Physician. Miss E. C. STEWART, Matron.
<i>Hairmyres Colony,</i> (232 beds)	- - -	Dr. JAMES JOHNSTONE, Resident Physician-Superintendent. Dr. J. F. S. EDGECOMBE, Resident Assistant Physician. Miss I. W. GRAY, Matron.
<i>County Maternity Hospital, Bellshill,</i> (48 beds)	- -	Dr. H. J. THOMSON, Physician-Superintendent. Miss A. CRAWFORD, Matron.
<i>County Convalescent Home, Calderbank House,</i> (30 beds)	- - -	Dr. G. MACLEOD MILLAR, Physician-Superintendent. Miss G. M'NEILL, Matron.
<i>Blantyre Hospital,</i> (10 beds)	- - -	Dr. H. J. THOMSON, Visiting Physician. Miss G. STEVENSON, Matron.
<i>Dalserf Hospital,</i> (10 beds)	- - -	Dr. J. R. SUTHERLAND, Visiting Physician. Miss H. J. MORE, Matron.

* 15 beds owned by the Middle Ward District Committee.

COUNTY OF LANARK.

DISTRICT OF THE MIDDLE WARD.

(Area, 186,118 acres.)

Report by the Medical Officer of Health

FOR THE YEAR 1924.

I.—VITAL STATISTICS.

The **Area** of the district at the close of the year was **186,118** acres.

The acreage and population of each parish is stated in Table B.

The density of population was 1.27 persons to the acre.

The **population** at the middle of the year has been estimated, from local sources, at **237,000**, an increase of 4,300.

The number of inhabited houses in the District, according to the Valuation Roll, was **44,836**, an increase of 816 compared with the year 1923. The number of uninhabited houses, according to the Roll, was 356, compared with 554 the previous year.

Statistical Tables.—Table A shows the birth-rate and death-rate per thousand of the population, and the infantile deaths per thousand births. It also shows the birth and death rates and infantile deaths for each year since 1920 and the average rates for the decennial periods between 1891 and 1920.

Table B shows the acreage, births, and deaths for the year in each parish and registration district, with the deaths classified according to cause, and Table C shows the deaths classified according to cause and age periods.

The **Births** registered numbered **6,251**—males, 3,190; females, 3,061—329, or 5·2 per cent., were illegitimate. The birth-rate per 1,000 of the population was **26·38**, which is the lowest rate ever recorded in the Middle Ward District. The lowest rate previously recorded, viz., 26·72, occurred in 1923, and reference to Table A shows that for many years the rate has undergone an almost unbroken fall.

Deaths during 1924 numbered **3,023**, as compared with 2,620 in 1923; the respective death-rates for the two years being **12·77** and 11·25 per thousand. The rise in the death-rate as compared with last year is largely accounted for by increased mortality in respect of three diseases, viz., measles, pneumonia, and influenza, the deaths from which, compared with the previous year, were more by 106, 124, and 84 respectively.

The deaths of infants under one year numbered 620, which is equivalent to 99·2 deaths per 1,000 births, as compared with the record low rate of 77·3 recorded last year. The deaths are referred to in detail in the portion of the Report dealing with Maternity and Child Welfare.

The number of births exceeded the deaths by 3,228, which constitutes the **natural increase** in population.

TABLE A.—BIRTH-RATES AND DEATH-RATES PER 1000 OF THE POPULATION. INFANTILE DEATHS PER 1000 BIRTHS.

Year.	Births.	Birth-rate.	Nett Deaths.	INFANTS UNDER 1 YEAR.		
				Death-rate.	Deaths.	Death-rate.
1891 to 1900	62,323	39·1	29,080	18·1	8,098	129·9
1901 to 1910	74,121	38·9	31,188	16·3	9,212	124·2
1911 to 1920	68,201	32·5	30,005	14·3	7,547	110·4
1920	7,562	35·0	2,891	13·3	763	100·9
1921	7,023	32·1	2,660	12·1	631	89·9
1922	6,364	28·3	2,936	13·0	650	102·1
1923	6,218	26·7	2,620	11·2	481	77·3
1924	6,251	26·3	3,023	12·7	620	99·2

PUBLIC INSTITUTIONS SITUATED WITHIN THE DISTRICT WHERE SOME PERSONS NOT BELONGING TO THE DISTRICT DIED AND WHOSE DEATHS ARE EXCLUDED.

Name of Institution.	Parish where situated.	Population. Police Census, Dec., 1924.	DEATHS.	
			Total during 1924.	Allocated to the Middle Ward District.
Kirklands Asylum,	- Bothwell,	290	26	8
Hartwood Asylum,	- Shotts,	1,342	115	43
Airbles House, -	- Dalziel,	118	2	1
Thrashbush Home, -	- New Monkland,	127	21	2
Omoa House, -	- Shotts,	192	49	36
County Hospital, Motherwell,	- Dalziel,	332	146	123
County Sanatorium, Stonehouse, -	- Stonehouse,	104	5	4
County Sanatorium, Shotts, -	- Shotts,	66	23	22
County Sanatorium, Uppertown, -	- New Monkland,	73	20	20
Hairmyres Colony, -	- East Kilbride,	265	2	2
County Maternity Hospital, Bellshill, -	- Bothwell,	78	40	33
County Convalescent Home, Calderbank House, -	- Old Monkland,	56	13	11
County Hospital, Blantyre,	Blantyre,	20	7	7
County Hospital, Dalserf,	Dalserf,	18	1	1
Blantyre Cottage Hospital, -	- Blantyre,	10	3	3
St. Vincent Home for Deaf and Blind Children, -	- Old Monkland,	222	—	—
Maternity Home Hospital, Airdrie, -	- New Monkland,	21	13	1
Collisdene Nursing Home, Strathaven, -	- Avondale,	18	4	2
Allanton House, Allanton, -	- Cambusnethan,	25	—	—
Homœopathic Hospital, Mount Vernon, -	- Old Monkland,	32	6	—
Total, -		3,409	496	319

PUBLIC INSTITUTIONS SITUATED OUTWITH THE DISTRICT WHERE SOME PERSONS BELONGING TO THE DISTRICT DIED AND WHOSE DEATHS ARE INCLUDED.

<i>General Hospitals.</i>		<i>Poor Law Institutions.</i>	
Glasgow Royal Infirmary,	- 149	11 Bothwell Road, Hamilton,	- 15
Glasgow Western Infirmary,	- 27	Hospital Street, Coatbridge,	- 6
Glasgow Victoria Infirmary,	- 11		
Edinburgh Royal Infirmary,	- 1		
<i>Infectious Hospitals.</i>			
Lightburn Hospital,	- - 27	All other Institutions,	- - 96
Ruchill Hospital,	- - 4		
	<hr/> 219		<hr/> 117
		<hr/> <hr/> TOTAL, 336 <hr/> <hr/>	

DEATHS IN RELATION TO AGE AND CAUSE.—Table C shows the deaths classified according to age and cause. The deaths are here arranged in recognised age-periods, and the percentage proportion of deaths at each age period is given :—

Infant period,	under 1 year,	620 deaths or 20·51 per cent.
Under school age,	1·5 years, -	446 „ 14·75 „
School age,	5·15 „ -	130 „ 4·30 „
Adolescent,	15·25 „ -	155 „ 5·12 „
Early mature period,	25·45 „ -	309 „ 10·22 „
Late „ „	45·65 „ -	613 „ 20·28 „
Post „ „	65 years and upwards, -	750 „ 24·82 „

Reference to Table A shows that the infantile mortality rate increased from 77·3 in 1923 to 99·2 in 1924, and that the general death-rate also showed an increase from 11·25 to 12·75 per thousand of the population in respect of those two years. If, however, the above table be compared with that for 1923, it will be found that, while the percentage proportion of deaths for all ages over 5 years has decreased, the percentage deaths of infants under one year and children of 1·5 years has risen from 18·36 per cent. to 20·51 per cent. in the former, and from 12·33 per cent. to 14·72 per cent. in the latter. Measles and pneumonia, in the order named, were the chief contributory factors to the increased mortality among infants and children under 5 years.

TABLE C.—MIDDLE WARD.—Year 1924.—Deaths classified according to cause and age periods, and corrected for Institutions, &c.

Population, 237,000; Acreage, 186,118; Registered Births, { Legitimate, M., 3,016; F., 2,907; } Deaths under 1 year, { Legitimate, 602. }
 { Illegitimate, M., 173; F., 155; Total, 6,251. } { Illegitimate, 18. }

CAUSE OF DEATH.	Registered in District.	Transferred from other Districts.	Transferred to other Districts.	Nett Deaths.	NETT DEATHS AT DIFFERENT AGE PERIODS.																			Rates per 1,000 Population.	Registered in Institutions in District.		
					Weeks.					Months.					Years.												
					- 1	1-	2-	3-	Total - 4	1-	3-	6-	9-	Total - 12	1-	5-	10-	15-	25-	35-	45-	55-	65-			75 and over.	
All Causes { Certified, - Uncertified, -	2,857 1	373 ...	209 ...	3,021 1	169 ...	33 ...	29 ...	24 ...	255 ...	101 ...	90 ...	84 ...	90 ...	620 ...	445 ...	80 ...	50 ...	155 ...	139 1	169 ...	244 ...	369 ...	410 ...	340 ...	12.7476 0042	493 ...	
Enteric Fever, -	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	0084	1
Tetanus, -
Smallpox, -
Chickenpox, -	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	0042	1
Measles, -	149	2	...	151	...	...	...	...	...	...	2	6	18	26	119	4	...	1	1	...	...	...	...	...	6371	13
Scarlet Fever, -	19	5	6	18	...	...	...	...	...	1	1	...	...	2	10	2	4	...	...	...	...	...	...	...	0759	16
Whooping-Cough, -	79	1	...	80	...	...	...	1	1	5	5	12	10	33	46	1	...	...	...	...	...	...	...	...	3375	1
Diphtheria, -	25	5	2	28	...	...	...	...	...	...	...	1	...	1	16	7	3	1	...	...	...	...	...	...	1181	20
Influenza, -	119	3	...	122	1	...	...	2	3	1	5	6	1	16	7	2	2	7	8	13	15	25	16	11	5147	5
Erysipelas, -	4	2	...	6	...	...	...	...	...	2	...	...	...	2	...	...	...	1	...	...	...	1	2	...	0253	2
Other Septic Diseases, -	18	14	1	31	...	...	...	...	...	...	1	...	1	2	5	4	3	5	4	1	2	3	1	1	1308	4
Cerebro-Spinal Fever, -	3	...	...	3	...	...	...	...	...	...	1	1	...	2	...	...	...	1	...	...	...	...	...	...	0126	1
Pulmonary Tuberculosis, -	141	7	16	132	...	...	...	...	...	1	...	...	...	1	8	6	5	35	31	16	14	13	3	...	5569	62
Meningeal Tuberculosis, -	53	7	...	60	...	...	...	...	...	...	4	4	6	14	30	4	6	3	...	2	...	1	...	...	2531	21
Abdominal Tuberculosis, -	41	5	3	43	...	...	...	...	...	...	...	...	5	5	18	8	2	7	2	...	1	...	...	...	1814	12
Other Tuberculosis, -	19	1	3	17	...	...	...	...	...	...	1	...	...	1	5	1	...	2	2	2	3	...	1	...	0717	8
Malignant Diseases, -	167	42	8	201	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	16	42	56	60	21	8481	16
Rheumatic Fever, -	12	1	...	13	...	...	...	...	...	...	...	...	...	...	1	...	2	3	2	1	2	...	1	1	0548	...
Encephalitis Lethargica, -	12	7	1	18	...	...	...	...	...	...	...	...	...	...	...	2	1	9	1	2	1	2	...	...	0759	9
Meningitis (Simple), -	31	2	1	32	...	...	...	...	...	2	3	4	1	10	12	7	...	1	...	1	...	1	...	...	1350	7
Cerebral Hemorrhage, -	176	16	11	181	2	...	...	...	2	...	...	...	...	2	...	...	...	1	1	7	13	45	67	45	7637	20
Convulsions, -	27	...	...	27	3	2	4	4	13	1	5	1	2	22	5	...	...	...	...	...	...	...	...	...	1139	1
Other Nervous Diseases, -	66	13	11	68	...	...	...	...	...	...	...	...	...	...	1	2	2	...	6	11	16	9	10	11	2869	24
Organic Heart Disease, -	245	16	33	228	...	...	...	...	...	...	...	...	...	...	...	1	3	9	6	11	32	56	72	38	9620	43
Bronchitis, -	161	7	5	163	1	...	2	2	5	11	7	7	4	34	11	...	...	...	2	5	19	25	41	26	6877	12
Pneumonia, -	323	26	30	319	...	2	...	...	2	16	19	24	28	89	93	10	6	15	20	19	13	24	22	8	13459	68
Laryngitis, -	2	...	...	2	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	0084	...
Other Respiratory Diseases, -	29	2	...	31	...	...	...	...	...	...	...	2	1	3	4	...	...	1	2	1	4	7	5	4	1308	2
Diarrhea, -	59	8	...	67	...	...	...	2	2	15	13	7	9	46	21	...	...	...	...	...	...	...	...	...	2827	3
Appendicitis and Typhlitis, -	1	18	...	19	...	...	...	...	...	...	...	1	...	1	...	3	...	3	3	5	1	2	1	...	0801	...
All Liver Diseases (not Malignant), -	7	5	1	11	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	2	4	...	2	0464	...
Other Digestive Diseases, -	50	24	1	73	...	1	1	...	2	...	4	1	...	7	8	5	...	6	6	4	4	12	10	11	3080	1	
Nephritis & Bright's Disease, -	48	15	8	55	...	...	...	...	...	...	1	...	...	1	...	...	2	5	4	6	11	14	8	4	2320	8
Puerperal Sepsis, -	18	2	5	15	...	...	...	...	...	...	...	...	...	...	...	...	...	3	7	5	...	...	...	...	0632	15
Diseases and Accidents of Pregnancy, &c., -	26	...	7	19	...	...	...	...	...	...	...	...	...	...	...	...	...	3	6	9	1	...	...	...	0801	17
Congenital Malformations, -	32	6	2	36	12	4	2	3	21	10	4	...	...	35	...	1	...	...	...	...	...	...	...	...	1518	3
Premature Birth, -	145	3	9	139	101	7	10	7	125	12	2	...	...	139	...	...	...	...	...	...	...	...	...	...	5864	22
Atrophy, Debility, &c., -	88	3	2	89	31	13	9	2	55	19	9	3	2	88	1	...	...	...	...	...	...	...	...	...	3755	11
Atelectasis, -	11	...	...	11	8	1	...	...	9	2	...	...	...	11	...	...	...	...	...	...	...	...	...	...	0464	1
Injury at Birth, -	6	1	...	7	6	1	...	...	7	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	0295	1
Suffocation, overlying, -	3	...	...	3	...	1	...	...	1	2	...	...	...	3	...	...	...	...	...	...	...	...	...	...	0126	...
Syphilis, -	3	...	1	2	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	1	...	...	...	0084	3
Rickets, -
Violence, -	76	59	14	121	...	...	...	...	...	...	...	...	1	1	18	9	4	17	10	14	22	10	10	6	5105	2
Suicide, -	13	2	4	11	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	3	1	3	1	0464	...
Other Defined Diseases, -	296	40	20	316	3	1	1	...	5	1	2	3	1	12	2	1	4	7	9	13	23	32	69	144	13333	38	
Ill-defined Diseases, -	55	3	6	52	1	...	...	1	2	...	...	1	...	3	3	...	...	1	2	4	9	16	8	6	2194	2
Total, -	2,861	373	211	3,023	169	33	29	24	255	101	90	84	90	620	446	80	50	155	140	169	244	369	410	340	12.7	496	

Infectious Diseases.—The number of deaths due to infectious diseases which are compulsorily notifiable was 643, made up thus:—

Diphtheria, - - -	28	Cerebro-spinal Fever,	3
Erysipelas, - - -	6	Pulmonary Tuberculosis,	132
Scarlet Fever, - - -	18	Tuberculosis (all other	
Typhoid Fever, - - -	2	forms), - - -	120
Puerperal Sepsis, - - -	15	Pneumonia, - - -	319

The deaths from infectious diseases not compulsorily notifiable amounted to 299:—Measles, 151; whooping-cough, 80; diarrhoea, 67; chickenpox, 1. The prevalence of the various infectious diseases is further referred to in the second portion of the Report.

Respiratory Diseases.—The deaths during the year numbered 637, and the following statistics show the deaths and death-rates of the various forms for the past five years:—

PNEUMONIA.		BRONCHITIS.		INFLUENZA.		OTHER RESPIRATORY DISEASES.		Total Deaths.
Year.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	
1920	272	1.25	178	0.82	80	0.37	43	573
1921	189	0.86	162	0.74	47	0.21	40	438
1922	301	1.33	204	0.90	121	0.53	36	662
1923	195	0.84	123	0.53	38	0.16	29	385
1924	319	1.34	163	0.68	122	0.51	33	637

It will be noted from the table given above that the mortality from respiratory diseases has increased from 385 in 1923 to 637 in the year under review, and that no fewer than 319 deaths were due to pneumonia. Omitting this disease from the list of those which are compulsorily notifiable, it will be seen that the deaths from respiratory diseases, viz., 637, are almost double the deaths (viz., 324) due to all notifiable infectious diseases put together, and nearly five times as many as the deaths from pulmonary tuberculosis.

Malignant Diseases.—The deaths falling under this heading numbered 201, as compared with 209 in the previous year. The following table shows the distribution of the disease, according to age and sex, and according to the organs and parts of the body affected:—

Age Period.	Sex.	Digestive System.					Genito-Urinary System.				Mammary Gland	Bones and Joints.	Mediastinal Glands.	Larynx.	Cerebral.	Others.	Total.
		Stomach.	Intestines.	Digestive Glands.	Unclassified.	Others.	Uterus.	Bladder.	Kidney.	Epithelioma and Rodent Ulcer.							
1-5 Years	{ M. F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5-10 "	{ M. F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10-15 "	{ M. F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15-20 "	{ M. F.	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
20-25 "	{ M. F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
25-30 "	{ M. F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30-35 "	{ M. F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
35-40 "	{ M. F.	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
40-45 "	{ M. F.	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	4
45-50 "	{ M. F.	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
50-55 "	{ M. F.	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	11
55-60 "	{ M. F.	4	1	3	—	—	—	—	—	—	—	—	—	—	—	—	9
60-65 "	{ M. F.	7	5	—	—	—	—	—	—	—	—	—	—	—	—	—	17
65-70 "	{ M. F.	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	13
70-75 "	{ M. F.	10	5	—	—	—	—	—	—	—	—	—	—	—	—	—	8
75 years and over,	{ M. F.	7	2	—	—	—	—	—	—	—	—	—	—	—	—	—	19
All Ages, ...	{ M. F.	31	27	1	—	—	—	—	—	—	—	—	—	—	—	—	101
	{ M. F.	34	11	5	—	—	—	—	—	—	—	—	—	—	—	—	100

TABLE E—NUMBER OF CASES OF INFECTIOUS SICKNESS RECOGNISED IN EACH PARISH DURING 1924.

PARISH.	Smallpox.	Diphtheria.	Erysipelas.	Scarlet Fever.	Typhus Fever.	Typhoid Fever.	Continued Fever.	Puerperal Fever.	Cerebro-Spinal Fever.	Infantile Paralysis.	Ophthalmia Neonatorum.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Malaria.	Dysentery.	Trench Fever.	Primary Pneumonia.	Influenza-Pneumonia.	Tetanus.	Total
1. Avondale, -	-	6	2	27	-	-	-	-	-	-	1	10	8	-	-	-	35	1	-	90
2. East Kilbride, -	-	4	2	15	-	-	-	-	-	-	1	9	4	-	-	-	6	1	-	42
3. Glasgow, -	-	-	1	7	-	-	-	-	-	-	-	4	3	-	-	-	8	-	-	23
4. Stonehouse, -	-	4	2	5	-	-	-	-	-	-	-	3	13	-	-	-	3	-	-	30
<i>First Division,</i>																				
5. Blantyre, -	-	14	7	54	-	-	-	-	-	-	2	26	28	-	-	-	52	2	-	185
6. Bothwell, -	-	25	19	42	-	-	-	10	-	-	17	41	41	-	-	-	139	7	-	341
7. Cambuslang, -	-	142	66	412	-	21	-	19	2	1	23	156	156	2	-	-	620	17	-	1,637
8. Cambusnethan, -	-	43	20	101	-	1	2	6	-	1	18	45	40	1	-	-	136	18	-	432
9. Dalserf, -	-	16	14	32	-	2	-	3	-	-	2	26	23	-	-	-	48	3	-	169
10. Dalziel, -	-	11	8	23	-	4	-	1	-	2	11	16	45	-	-	-	53	2	-	176
11. Hamilton, -	-	6	3	15	-	-	-	-	-	-	-	-	2	-	-	-	8	3	-	37
<i>Second Division,</i>																				
12. New Monkland, -	-	8	10	32	-	3	-	3	-	-	4	19	16	-	-	-	28	6	-	129
13. Old Monkland, -	-	251	140	657	-	31	2	42	2	4	75	303	323	3	-	-	1032	56	-	2,921
14. Shotts, -	-	23	4	64	-	2	-	3	-	-	3	21	32	-	1	-	23	6	-	182
<i>Third Division,</i>																				
<i>Middle Ward,</i>	-	22	19	106	-	-	-	9	-	-	4	26	50	-	-	-	81	25	-	342
Cases notified in Institutions of persons belonging to other Areas, -	-	38	22	98	-	5	-	-	3	5	13	27	44	1	-	-	71	25	-	352
	-	83	45	268	-	7	-	12	3	5	20	74	126	1	1	-	175	56	-	876
	-	348	192	979	-	38	2	54	5	9	97	403	477	4	1	-	1259	114	-	3,982

Cases notified in Institutions of persons belonging to other Areas, -

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II.—PREVALENCE OF INFECTIOUS DISEASE.

The diseases included under this heading are classified in relation to notification, and are divided into two groups. Group I includes diseases which are compulsorily notifiable (a) under the Notification Act, (b) by adoption under the Notification Act, and (c) by order of the Scottish Board of Health; and Group II, not compulsorily notifiable diseases. The diseases included in these groups are as follows :—

GROUP I.

(a)	(b)	(c)
Smallpox.	<i>August, 1906.</i>	<i>1st August, 1912.</i>
Diphtheria.	Cerebro-spinal Meningitis.	Pulmonary Tuberculosis.
Scarlet Fever.	<i>24th October, 1912.</i>	<i>1st July, 1914.</i>
Typhus Fever.	Acute Poliomyelitis.	All forms of Tuberculosis.
Typhoid Fever.	Tetanus.	<i>1st November, 1918.</i>
Puerperal Fever.	Anthrax.	Ophthalmia Neonatorum.
Erysipelas.	Glanders.	<i>1st August, 1919.</i>
	Actinomycosis.	Malaria.
		Dysentery.
		Trench Fever.
		Acute Primary
		Pneumonia.
		Acute Influenzal-
		Pneumonia.
		<i>26th December, 1924.</i>
		Infective Jaundice.

GROUP II.

Measles.	Chickenpox.	Ringworm.
German Measles.	Mumps.	Scabies.
Whooping-Cough.		

Compared with the previous year there was an apparent increase of 153 cases notified, but to this figure should be added 281 cases of chickenpox, notified during 1923 under the Board's Regulations of 20th July of that year, so that the net increase is really 434 cases. Increases occurred as follows :—Primary pneumonia, 561; influenzal pneumonia, 77; diphtheria, 48; ophthalmia neonatorum, 36; erysipelas, 17; infantile paralysis, 8; non-pulmonary tuberculosis, 5; and continued fever, 2. Decreases were recorded as follows :—Chickenpox, 281; scarlet fever, 263; typhoid fever, 24; puerperal fever, 10; dysentery, 8; pulmonary tuberculosis, 7; cerebro-spinal meningitis, 6; and tetanus, 2. The increase in the number of cases

of ophthalmia neonatorum is more apparent than real, it having been decided during the year that every case in which a swab was taken should be included as a case of ophthalmia neonatorum, whereas previously only cases in which the swab gave a positive result were included.

Smallpox, Typhus Fever, Anthrax, Glanders, Actinomycosis, Tetanus, Trench Fever, and Infective Jaundice.

No notifications were received in respect of these diseases.

Diphtheria and Membranous Croup.

Table D1 shows the prevalence of diphtheria during the past five years and during each quinquennial period from 1891 to 1920:—

TABLE D1.

Year.	Cases Notified.	Deaths Registered.	Deaths per 100 Cases.	Cases per 1,000 Population.	Deaths per 10,000 Population.
1891-95 (Average)	210	74	35.1	1.39	4.9
1896-1900 „	144	35	24.3	0.85	2.0
1901-05 „	151	34	22.3	0.80	1.8
1906-10 „	383	41	10.8	1.93	2.0
1911-15 „	336	32	9.9	1.63	1.5
1916-20 „	304	29	10.0	1.42	1.3
1920	394	27	6.8	1.82	1.2
1921	314	33	10.5	1.43	1.5
1922	285	46	16.1	1.26	2.0
1923	300	24	8.0	1.28	1.0
1924	348	28	8.0	1.46	1.1

While the number of cases of diphtheria is 48 more than for the previous year, and the number of deaths 4 more, the fatality rate remains low.

After admission to hospital the diagnosis was revised in 44 cases as follows:—Sore throat, 14; scarlet fever, 7; measles, 6; pneumonia, 4; measles and pneumonia, 2; tonsillar abscess, 2; tonsillitis, 1; measles and whooping-cough, 1; cancrum oris and measles, 1; œdema glottis, 1; erysipelas, 1; pleural effusion, 1; naso-pharyngitis, 1; serous meningitis, 1; foreign body in bronchus, 1. In addition, in 3 cases no evidence of diphtheria could be detected, 2 cases were regarded as doubtful, while in 2 cases the diphtheria was complicated with another disease, in the one case measles, and in the other tuberculosis.

The cases and deaths during each month and at certain age-periods are shown below :—

	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Cases,	30	33	40	29	27	27	29	31	21	23	35	23	348
Deaths,	1	1	—	4	—	2	6	4	5	2	1	2	28
Ages,													
			1	1-5	5-15	15-25	25-45	45-65	65+				All ages.
Cases,			12	110	177	33	15	1	—				348
Deaths,			1	16	10	1	—	—	—				28

The number of cases removed to hospital was 321, or 92·2 per cent. of the total.

Antitoxin was administered by private practitioners to 45 cases prior to their admission to hospital, and to 16 cases which were treated at home. Twelve cases which were not removed to hospital received no serum, nor was it given to 276 cases before their admission.

During the year 172,000 units of antitoxin were supplied through police stations to medical practitioners. In addition to this, practitioners were supplied with 288,000 direct from the Public Health Department, or through local dispensaries.

The distribution of cases and deaths throughout the district was as follows :—

Avondale.—Six cases were notified. Two cases were isolated at home; 4 were removed to hospital. One of them proved to be merely a sore throat. No death occurred.

East Kilbride.—Four cases; 1 death.

Stonehouse.—Four cases. All were removed to hospital, where 1 died.

Blantyre.—25 cases; no death. The cases were distributed as follows :—Auchentibber, 1; High Blantyre, 10; Low Blantyre, 7; Springwells, 7.

Bothwell.—142 cases; 6 deaths. The cases were distributed as follows :—Bothwell, 9; Bothwellhaugh, 5; Bellshill, 33; Holytown, 10; Carfin, 4; Carnbroe, 1; Chapelhall, 4; Mossend, 30; Newarthill, 8; Newhouse, 3; Newlands, 3; New Stevenston, 9; Tannochside, 5; Uddingston, 18. The deaths were distributed as follows :—Newarthill, 1; Newhouse, 2; Tannochside, 1; Uddingston, 2.

Cambuslang.—43 cases; 4 deaths. The cases were distributed as follows :—Cambuslang, 30; Halfway, 8; Hallside, 1; Newton, 4.

Cambusnethan.—16 cases; 1 death. The cases were distributed as follows :—Morningside, 1; Newmains, 7; Netherton, 1; Overtown, 2; Stane, 1; Waterloo, 2; Wishaw, 2.

Dalserf.—11 cases were notified, including 10 from Larkhall, and 1 proved to be scarlet fever. All were removed to hospital, where 1 died.

Dalziel.—6 cases, 1 death. The cases were evenly distributed throughout the parish.

Hamilton.—Eight cases; 1 death. The cases came from the following areas:—Eddlewood, 1; Ferniegair, 2; Limekilnburn, 2; Quarter, 2; Udston, 1.

New Monkland.—23 cases; 5 deaths. The cases were distributed as follows:—Caldercruix, 3; Glenboig, 2; Glenmavis, 1; Greengairs, 9; Longriggend, 3; Plains, 3; Riggend, 1; Wattstown, 1. The deaths were distributed as follows:—Caldercruix, 1; Glenmavis, 1; Greengairs, 2; Wattstown, 1. One patient died before admission to hospital, 1 died the day after admission, and 1 died on the day of admission. In the last-named case the diphtheria was complicated with broncho-pneumonia.

Old Monkland.—22 cases; 5 deaths. The cases were distributed as follows:—Baillieston, 2; Bargeddie, 1; Broomhouse, 3; Calderbank, 5; Carmyle, 5; Hollandhurst, 1; Tollcross, 5.

Shotts.—38 cases; 2 deaths. The cases were distributed as follows:—Cleland, 8; Dykehead, 24; Harthill, 1; Salsburgh, 5. Death had resulted in both fatal cases before notification was received.

Scarlet Fever.

Table D2 shows the prevalence of scarlet fever during the past five years, and during each quinquennial period from 1891 to 1920.

TABLE D2.

Year.	Cases Notified.	Deaths Registered.	Deaths per 100 Cases.	Cases per 1,000 Population.	Deaths per 10,000 Population.
1891-95 (Average)	1,116	34	3.06	7.42	2.2
1896-1900	1,035	41	3.98	6.13	2.4
1901-05	645	25	3.90	3.44	1.3
1906-10	927	24	2.54	4.67	1.1
1911-15	1,179	29	2.43	5.70	1.3
1916-20	929	21	2.61	4.36	0.9
1920	1,349	15	1.11	6.24	0.6
1921	1,229	26	2.11	5.61	1.1
1922	1,261	26	2.06	5.61	1.1
1923	1,242	22	1.77	5.33	0.9
1924	979	18	1.83	4.13	0.7

The total number of cases notified was 979, which shows an incidence considerably lower than for the previous four years. The notifications received each month averaged approximately 82, the actual number being below the average for six of the months and above the average for six, viz., for January, May, September, October, November, and December, when 110, 84, 88, 115, 105, and 86 cases occurred respectively. The rise during these months was accounted for chiefly by the prevalence of the disease in Bothwell, Cambuslang, Old Monkland, and Shotts Parishes.

The predominating type of disease was mild, and many cases were so mild as to at first escape recognition. No common source of infection was discovered in any particular series of cases, infection being apparently conveyed by personal contact.

The number of cases removed to hospital was 897, or 91·6 per cent. of all the cases notified.

The age incidence of cases and deaths for the whole district was :—

Ages.	-	-1	1-5	5-15	15-25	25-45	45-65	All ages.
Cases,	-	7	268	599	79	23	3	979
Deaths,	-	2	10	6	—	—	—	18

Return Cases.—13 of the cases discharged from hospital during the year were apparently still capable of carrying infection, and gave rise to 19 return cases. Of the infecting cases, it was found that in 7 no departure from apparently normal health could be found, 1 had developed rhinorrhœa, and 5 a nasal discharge.

The interval which elapsed between the dismissal from hospital of the infecting cases and the onset of illness in the return cases was as follows :—

1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.
8	6	4	1

Altered Diagnosis.—Of the 897 cases admitted to hospital, the diagnosis of scarlet fever was regarded as doubtful in 7 cases, while in 31 no evidence of the presence of scarlet fever could be detected. The diagnosis was revised in 23 other cases as follows :—Sore throat, 5; rubella, 3; erythema, 3; abscess, 1; burn, 1; chickenpox, 1; diarrhœa, 1; naso-pharyngitis, 1; phenosis, 1; pyelitis, 1; pneumonia, 1; puerperal fever, 1; rhinitis, 1; tuberculous meningitis, 1; whooping-cough, 1. In 4 cases the scarlet fever was complicated with measles, and in 1 case with diphtheria.

The distribution of cases and deaths according to parish was as follows:—

Avondale.—27 cases; no deaths. The cases were spread over the year, only the months of February, March, and December being free. Two cases occurred in dairy farms. Eight patients were treated at home, the remainder at the County Hospital, Motherwell.

East Kilbride.—15 cases; no deaths. Six of these cases occurred at dairy farms.

Glassford.—Seven cases; no deaths. One case occurred at a dairy farm. All the cases were removed to hospital.

Stonehouse.—Five cases; no deaths.

Blantyre.—42 cases; 1 death. The cases were distributed as follows:—Auchentibber, 2; Caldervale, 6; High Blantyre, 26; Low Blantyre, 1; Springwells, 1; Stonefield, 6. The fatal case died the day after admission to hospital.

Bothwell.—412 cases; 5 deaths. The cases were distributed as follows:—Bothwell, 38; Bellshill, 68; Bothwellhaugh, 21; Carfin, 11; Carnbroe, 30; Chapelhall, 27; Cleland, 3; Holytown, 2; Mossend, 37; Nackerty, 10; Newarthill, 49; Newhouse, 1; New Stevenston, 35; Tannochside, 18; Thorniewood, 3; Uddingston, 59.

Cambuslang.—101 cases; 2 deaths. The cases were distributed as follows:—Cambuslang, 72; Halfway, 17; Hallside, 3; Kirkhill, 4; Newton, 4; Westburn, 1.

Cambusnethan.—32 cases; 1 death. The cases were distributed as follows:—Allanton, 1; Bonkle, 2; Chapel, 1; Netherton, 1; Newmains, 15; Stane, 11; Waterloo, 1.

Dalserf.—23 cases were notified; no death. The diagnosis was revised in 8, of which 4 were classified as suffering from erythema; 1 from rubella; 1 from puerperal fever; 1 from headache; and 1 from broncho-pneumonia. Three notified cases of scarlet fever were nursed at home. The cases were distributed as follows:—Cornsilloch, 4; Dalserf, 1; Larkhall, 17; Shawburn, 1.

Dalziel.—15 cases; 1 death. Thirteen of the cases occurred in New Logans Rows.

Hamilton.—32 cases notified; 1 death. The diagnosis was later altered in 2 cases. Four dairy farms were affected, a case occurring

in each, and one in a ploughman's cottage attached to one of the farms. The cases were distributed in the following areas:—Cadzow, 9; Eddlewood, 3; Ferniegair, 1; Limekilnburn, 1; Meikle Earnock, 4; Quarter, 8; Udston, 2; Farms, 4.

New Monkland.—64 cases; 2 deaths. The cases were distributed as follows:—Caldercruix, 2; Darnagavil, 1; Gartlea, 8; Glenboig, 3; Glengowan, 6; Glenmavis, 1; Greengairs, 10; Longriggend, 1; Meikle Drumgray, 2; Moffat Mills, 3; Plains, 6; Riggend, 12, Stand, 6; Wattstown, 3. No fewer than 6 cases occurred in one family at Riggend, the initial case having a fatal termination.

Old Monkland.—106 cases; 2 deaths. The cases were distributed as follows:—Baillieston, 21; Bargeddie, 7; Broomhouse, 11; Calderbank, 10; Carmyle, 16; Easterhouse, 3; Faskine, 2; Gartgill, 1; Glenboig, 1; Luggiebank, 1; Mount Vernon, 6; Rosehall, 3; Tollcross, 24. In one of the fatal cases scarlet fever was complicated with broncho-pneumonia.

Shotts.—98 cases; 3 deaths. The cases were distributed as follows:—Cleland, 11; Dykehead, 40; Eastfield, 1; Forrestfield, 7; Gartness, 1; Harthill, 34; Newhouse, 1; Northrigg, 1; Salsburgh, 1; Southrigg, 1. One patient died before notification, and another on the day of admission to hospital.

Typhoid Fever.

TABLE D3.—TYPHOID FEVER.

Year.	Cases Notified.	Deaths Registered.	Deaths per 100 Cases.	Cases per 1,000 Population.	Deaths per 10,000 Population.
1891-95 (Average)	465	56	11.95	3.0	4.2
1896-1900	350	45	12.73	2.0	2.6
1901-05	294	40	13.54	1.5	2.1
1906-10	206	19	9.40	1.0	0.9
1911-15	111	13	11.09	0.5	0.5
1916-20	86	11	12.74	0.3	0.5
1920	63	6	9.5	0.2	0.2
1921	106	14	13.2	0.4	0.6
1922	46	4	8.7	0.2	0.1
1923	62	5	8.2	0.2	0.2
1924	38	2	5.2	0.1	0.08

The incidence of typhoid fever, as also the fatality rate, showed a gratifying diminution.

The monthly and age incidence of cases and deaths was as follows:—

Month—	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Cases, -	6	1	4	7	1	1	2	7	8	1	—	—	38
Deaths, -	—	—	—	1	—	—	—	—	1	—	—	—	2
Ages.	-	-	-1	1-5	5-15	15-25	25-45	45-65	All ages.				
Cases,	-	—	—	2	11	10	12	3	38				
Deaths,	-	—	—	—	—	2	—	—	2				

35 cases (92·1 per cent.) were removed to hospital, and in 15 cases the diagnosis of typhoid fever was found to require revision. The altered diagnoses were as follows:—Positive Widal, 7; influenza, 2; coliform septicæmia, 1; diarrhœa, 1; doubtful, 1; encephalitis lethargica, 1; paratyphoid B., 1; and pneumonia, 1. Deducting these cases, the number of actual cases of typhoid fever is reduced to 23. In addition to these cases, the existence of another case of paratyphoid B. was brought to the notice of the department, but this case was not notified as typhoid fever.

The cases were distributed throughout the district as follows:—Bothwell, 21; Cambuslang, 1; Cambusnethan, 2; Dalserf, 4; Hamilton, 3; New Monkland, 2; and Shotts, 5. No cases occurred in the parishes of Avondale, East Kilbride, Glassford, Stonehouse, Blantyre, Dalziel, or Old Monkland.

The distribution of cases and deaths according to parish was as follows:—

Bothwell.—21 cases; 1 death. The cases were distributed as follows:—Bothwellhaugh, 1; Bellshill, 8; Holytown, 2; Mossend, 5; Newarthill, 2; New Stevenston, 2; Uddingston, 1. The fatal case died the day after admission to hospital.

Cambuslang.—One case was notified as suffering from enteric fever, and removed to hospital acutely ill. Patient died two days after admission from encephalitis lethargica. In addition, one case of paratyphoid B., which was brought to the notice of the department through the Glasgow Medical Officer of Health, was kept under observation at home.

Cambusnethan.—Two cases; no deaths.

Dalserf.—Four cases from Larkhall were notified as suffering from enteric fever. Two were removed to the County Hospital, Motherwell, where the diagnosis was not corroborated, one having a negative Widal reaction, and the other being found to be suffering from pneumonia.

The third case, visited on the day of notification, was found to be dead after an illness of seven days' duration. The diagnosis in this case was doubtful. The fourth case was sent by a general practitioner to the Royal Infirmary, Glasgow, on 5th June, under the diagnosis of osteomyelitis of the femur, and possible fracture. Two days later patient was transferred to Belvidere Hospital, suffering from enteric fever. The source of infection could not be found.

Hamilton.—Three cases were reported in one family in Allanton Rows, Ferniegair. The illness in the house came to the notice of the Public Health Authority after one patient had completely recovered and another was convalescent. This patient and two others, in the acute stage of the disease, were removed to hospital, where they all recovered. The original source of infection could not be found.

New Monkland.—Two cases; no deaths.

Shotts.—Five cases; no deaths.

Continued Fever.

Two cases were brought to the notice of the Department from Cambuslang Parish, both patients suffering from an ill-defined, febrile condition. After treatment in the County Hospital, Motherwell, they were discharged well, with a diagnosis of enteric fever and febrile catarrh respectively.

Cerebro-Spinal Meningitis.

Five cases were notified, and of those 4 died. Two of the cases died at home. Notification was not received in one until after death had occurred, and in the other notification was received the day patient died. Two cases were admitted to hospital, and in 1 the diagnosis was revised after lumbar puncture had been carried out, the revised diagnosis being broncho-pneumonia. The fifth case was subsequently notified by another medical practitioner as suffering from acute anterior poliomyelitis.

Puerperal Fever.

The number of cases notified was 54, and the number of deaths 15, as compared with 64 cases and 17 deaths the previous year.

The disease is dealt with fully in the Maternity and Child Welfare Section of the report.

Erysipelas.

192 cases were notified, and 6 deaths registered. 39 cases were removed to hospital.

Ophthalmia Neonatorum.

97 cases, as compared with 61 in 1923, were notified. The disease is dealt with in the Maternity and Child Welfare Section of the report. As stated in another portion of this report, the increase is more apparent than real.

Pneumonia.

1,387 cases of pneumonia were brought to the notice of the Department, 1,167 cases being notified, 115 were discovered from the Registrars' returns of deaths, and 105 were not notified.

Only 175 cases were removed to hospital.

Mortality.—The deaths due to pneumonia (all forms) numbered 319, giving a fatality-rate of 23 per cent., and a death-rate of 1·34 per 1,000 of the population. The following table shows the annual number of deaths and the death-rate per 1,000 since 1920 :—

	Year—1920	1921	1922	1923	1924
Deaths,	- 272	189	301	195	319
Death-rate, -	1·24	·86	1·33	0·83	1·34

The distribution of cases and deaths throughout the year is shown below :—

Month—	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Cases, -	78	260	265	130	128	83	55	45	38	62	92	151	1,387
Death, -	14	50	88	49	21	13	12	5	13	9	18	27	319

The age-distribution of cases and deaths, together with the fatality-rate in each age group, are given in the following table :—

		All ages. - 1 1·5 5·15 15·25 25·45 45·65 65 and over.									
Cases,	(Primary.	-	-	1,270	216	463	219	109	125	85	53
	(Influenzal,	-	-	117	6	15	17	22	27	26	4
Total,		-	-	1,387	222	478	236	131	152	111	57
Deaths, -		-	-	319	89	93	16	15	39	37	30
Fatality-rate, -		-	-	23%	40%	19%	6%	11%	25%	33%	52%

Of the 319 deaths from pneumonia, 100 had taken place before notification was received, 131 occurred in cases which were not notified at all, and of the remaining 88, the following tabular statement shows the day of illness on which notification was obtained :—

														Over	
Day of Illness,	-	1	2	3	4	5	6	7	8	9	10	11	12	12	Total.
Fatal Cases															
Notified, -	-	1	5	6	14	12	6	6	8	6	5	4	2	11	88*

* In 2 other deaths this information could not be obtained.

Information with reference to the day of illness on which each case was notified was recorded in the 1,041 cases as follows:—

Day of Illness,	1	2	3	4	5	6	7	8	9	10	11	12	Over 12	Died before Notifica- tion.
Cases Notified,	5	30	62	102	126	128	128	83	63	52	35	28	99	100

Acute Anterior Poliomyelitis.

Nine cases were notified.

Malaria.

Four cases were notified, the patient in each instance being an adult male, who had been infected while on military service.

Dysentery.

Only 1 case was notified.

Diarrhœal Diseases.

The annual number of deaths and the death-rates per 1,000 of the population for each of the years 1920-24 were:—

	1920	1921	1922	1923	1924
Deaths, - - -	128	112	71	73	67
Death-rate per 1,000,	0.59	0.51	0.31	0.31	0.28

All the deaths were of children under 2 years of age, 46 being of infants under 1 year and 21 of children from 1 to 2 years, a decrease of 11 and an increase of 5 respectively, compared with the corresponding figures for 1923.

Measles.

The deaths from measles show a considerable increase, compared with the previous year. The disease not being compulsorily notifiable, its exact incidence is not known, but from the distribution of deaths, it appears to have been prevalent chiefly during the months of February, March, April, and May. The cases were fairly evenly distributed throughout the district, with the exception of Blantyre Parish, in which the incidence was high.

The annual number of deaths and the death-rates per 1,000 of the population for each of the years 1920-24 were:—

	1920	1921	1922	1923	1924
Deaths, - - -	73	10	147	45	151
Death-rate per 1,000,	.33	.04	.63	.19	.63

Whooping-Cough.

The annual number of deaths and the death-rates per 1,000 of the population for each of the years 1920-24 were :—

	1920	1921	1922	1923	1924
Deaths, - - -	50	133	85	67	80
Death-rate per 1,000,	·23	·60	·37	·28	·33

21 per cent. of the deaths from measles and whooping-cough were of infants under 1 year of age, and 97 per cent. were of children under 5 years.

Ringworm.

106 cases of ringworm were brought under the notice of the Department, and 2 were treated with X-rays at the County Hospital, Motherwell.

Scabies.

During the year 111 cases were reported. As it is often difficult to prevent the spread of this disease and to have treatment satisfactorily carried out at home, hospital treatment was offered where this was considered necessary.

Venereal Diseases.

The County scheme for the recognition and treatment of these diseases includes the Middle Ward District, and the work done under the scheme is given in the County Report, along with the number of cases dealt with from each area at the various treatment centres.

School Closure.

It was not found necessary to recommend the closure of any school or department of a school during the year.

Anthrax.

Under the Diseases of Animals Act, 1894, 8 outbreaks of anthrax, affecting 9 cattle, were reported by the Inspector under the Anthrax Order. The outbreaks were distributed as follows:—Avondale, 3; Bothwell, 2; Dalserf, 1; Hamilton, 1; and Shotts, 1.

Institutions.

During the year 4,108 Middle Ward patients, and 482 patients from areas outwith the Middle Ward, were admitted to the various institutions, the total of 4,590 admissions being the highest so far

recorded. The respective institutions are dealt with separately in another section of this report, and a brief reference here will suffice. The need of increased accommodation for the proper isolation and treatment of cases of acute infectious disease, including pneumonia, measles, and whooping-cough, is still very clamant, and it is disappointing to have to record that building operations at the County Hospital, Motherwell, in connection with the provision of an additional two-storey pavilion and the extension of the Nurses' Home, have been very slow; it is certain that the buildings will not be ready for occupation for many months yet. The question of the provision of additional accommodation for measles and whooping-cough has been referred to a special committee.

The following statistical tables, F (*a*) and (*b*), give detailed information with regard to the admissions:—

TABLE F.—HOSPITALS AND SANATORIA. (a) PATIENTS ADMITTED FROM MIDDLE WARD DISTRICT.

HOSPITALS AND SANATORIA.	Cases in Hospital at the beginning of year.	Admitted during year from the Middle Ward.	Dis- charged.	Died.	Cases remaining in Hospital at the close of year.	NATURE OF CASES ADMITTED DURING YEAR.														Children.	Mothers.	Total.			
						Scarlet Fever.	Typhoid Fever.	Cerebro-Spinal Fever.	Puerperal Fever.	Erysipelas.	Pneumonia.	Continued Fever.	Pulmonary Tuberculosis.	Tuberculous All other forms.	Veneral Diseases.	Ophthalmia Neonatorum.	Encephalitis Lethargica	Other Diseases.	Measles.				Whooping-cough.		
Motherwell, -	174	1,579	1,461	124	168	280	741	34	2	38	35	137	2	9	124	36	6	41	62	27	5	—	—	—	1,579
Lightburn,	21	280	245	26	30	41	153	—	—	6	3	38	—	5	—	—	—	14	2	4	14	—	—	—	280
Shotts, -	44	163	137	23	47	—	—	—	—	—	—	—	—	134	29	—	—	—	—	—	—	—	—	—	163
Stonehouse,	67	108	105	4	66	—	—	—	—	—	—	—	—	—	92	—	—	—	16	—	—	—	—	—	108
Longriggend, -	40	167	144	20	43	—	—	—	—	—	—	—	—	122	45	—	—	—	—	—	—	—	—	—	167
Hairmyres, -	156	253	237	2	170	—	—	—	—	—	—	—	—	129	124	—	—	—	—	—	—	—	—	—	253
Dalserf, -	14	30	28	1	15	—	—	—	—	—	—	—	—	—	30	—	—	—	—	—	—	—	—	—	30
Bellshill, -	29	1,061	1,023	34	33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	742	319	1,061
Calderbank House, 27	344	338	338	11	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	173	171	344
Blantyre Hospital, 15	123	116	116	7	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	58	65	123
TOTALS, -	587	4,108	3,834	252	609	321	894	34	2	44	38	175	2	399	444	36	6	55	80	31	19	973	555	4,108	

Tuberculosis.

Mortality.—The deaths from all forms of tuberculosis numbered 251, viz. :—Pulmonary, 132 ; meningeal, 60 ; abdominal, 43 ; and other forms, 16. In the following table the deaths are classified in age periods :—

Ages,	-1	1-5	5-10	10-15	15-25	25-35	35-45	45-65	65 and over.	Total.
Pulmonary, -	1	8	6	5	35	31	16	27	3	132
Meningeal, -	14	30	4	6	3	—	2	1	—	60
Abdominal, -	5	18	8	2	7	2	—	1	—	43
Other forms, -	1	4	1	—	2	2	2	3	1	16
Total, -	21	60	19	13	47	35	20	32	4	251

Death-rates.—The death-rates per 10,000 of the population were :—

	Pulmonary.	Meningeal.	Abdominal.	Other Forms.
1920, -	7.4	2.1	1.3	1.2
1921, -	6.3	2.1	1.2	1.3
1922, -	5.8	1.7	1.9	1.2
1923, -	6.3	2.2	1.8	1.2
1924, -	5.5	2.5	1.8	0.7

The average quinquennial death-rates per 10,000 of the population since 1891-1920, and for the years 1921, 1922, 1923, and 1924, are shown in the following table :—

Years.	Pulmonary.	Non-Pulmonary.	All Forms.
1891-1895, -	13.57	9.88	23.45
1896-1900, -	11.44	9.11	20.55
1901-1905, -	10.00	8.31	18.31
1906-1910, -	8.83	8.56	17.39
1911-1915, -	8.16	6.53	14.69
1916-1920, -	7.57	5.28	12.85
1921, -	6.35	4.75	11.10
1922, -	5.82	4.89	10.71
1923, -	6.31	5.28	11.59
1924, -	5.56	5.06	10.62

The most striking feature of the statistics is the record low death-rate from pulmonary tuberculosis, viz., 5.56 per 10,000 of the population. In 1923 the fall in the death-rate from pulmonary tuberculosis was interrupted, and although it was admitted that sufficient evidence did not then exist to define the cause, certain features of the increase, for example, age, distribution, and duration of illness, suggested that it might be due to the prevailing economic conditions. It is satis-

factory to find that this tentative and somewhat disturbing explanation does not require to be invoked on this occasion.

A general examination of the death-rates from tuberculosis reveals a very favourable situation. The average death-rate from all forms of tuberculosis during the years 1891-95 was 2·34 per 1,000 population; the rate for 1924 was 1·06. It is a notable achievement to find the deaths from these diseases reduced by 55 per cent. in thirty years, compared with a reduction in the death-rate from all other causes of 36 per cent.

The fall in the death-rate has not been shared equally by pulmonary and non-pulmonary tuberculosis, for whereas the reduction is 60 per cent. in the case of the former, it is 50 per cent. for the latter. Without suggesting that it stands in the relationship of cause and effect, more ample provision has been made for dealing with pulmonary tuberculosis than for non-pulmonary disease.

Notification.—There were on record at the beginning of the year 1,109 cases of pulmonary and 1,362 cases of non-pulmonary forms of the disease, and during the year 415 new cases of the former type and 480 new cases of the latter were brought to notice, giving a total of 1,524 and 1,842 cases respectively. The following tabular statement shows the number of new cases notified by medical practitioners, and those not so notified, the latter being cases which came to the knowledge of the Department for the first time through the dispensaries, or from the Registrar's death returns :—

	Pulmonary.	Non-Pulmonary.
New cases notified, - - - -	284	346
„ „ not notified, - - - -	131	134
	<hr/> 415 <hr/>	<hr/> 480 <hr/>

The new cases were dealt with as follows :—

	Pulmonary.	Non-Pulmonary.
Admitted to Sanatorium, - - -	203	206
Refused to go to Sanatorium, - -	95	108
Died before or soon after notification, -	47	100
Inmates of asylums, &c., - - -	11	—
Visitors or left district, - - -	6	12
Unsuitable for institutional treatment, -	26	33
Waiting treatment towards end of year,	27	21
	<hr/> 415 <hr/>	<hr/> 480 <hr/>

Types of Non-Pulmonary Cases.—The 480 new cases are classified in the following statement according to the localisation of the principal lesion present at the time of notification :—

Cervical glands, - - -	167	Special Organs—	
Abdomen, - - -	130	Eyes, 7; Kidney, 1;	
*Bones and joints, -	83	Bladder, 1; Testicle, 3;	
Meninges, - - -	61	Breast, 1, - - -	13
General, - - -	4	Skin and Subcutaneous	
		tissue, - - -	18
		Lupus, - - -	4
			<hr/>
			480
			<hr/>

* *Bones and Joints—Detailed.*—Spine, 16; Hip Joint, 23; Knee Joint, 9; Ankle Joint, 12; Elbow Joint, 5; Shoulder Joint, 1; Sacro-Iliac Joint, 1; Sternum, 1; Humerus, 1; Tibia, 2; Dactylitis, 8; Ilium, 1; Ribs, 2; Jaw, 1.

Distribution throughout District.—The parishes of residence are given in Table E.

Age and Occupation.—The cases are classified below according to age and occupation groups :—

Ages,	- 1	1-5	5-15	15-25	25-45	45-65	65+	Total.
Pulmonary,	- 1	3	120	76	123	57	8	415
Non-Pulmonary,	31	163	177	56	40	12	1	480

OCCUPATIONS.

Domestic Work—

	Pulmonary.	Non-Pulmonary.
Housewives, ...	52	22
Domestics, ...	23	12
Children, ...	36	199
Scholars, ...	114	170

Miners, &c.—

Miners, ...	60	31
Pithead Workers, ...	14	8

Metal Workers—

Steelworkers, ...	10	5
Ironworker, ...	—	1
Engineers, ...	3	—
Labourers, ...	3	1
Blacksmith, ...	1	—
Others, ...	3	—

<i>Carry forward,</i>	...	319	449
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					Pulmonary.	Non-Pulmonary.
<i>Brought forward,</i>					319	449
<i>Factory and Workshop—</i>						
Machinist,	—	1
Tailors,	...	...	...	...	3	—
Dressmaker,	...	...	...	...	1	—
Millworker,	...	...	...	...	1	—
Joiner, ...	...	...	...	...	—	1
Saddler,	...	...	...	...	1	1
Others,	...	...	...	...	5	1
Shopkeepers,	...	...	...	...	11	1
<i>Stone or Brickworkers—</i>						
Mason,	...	...	...	...	1	—
Labourers,	...	...	...	...	3	1
Miscellaneous,	...	...	...	...	30	11
No Occupation,	...	...	...	...	40	14
					<hr/> 415	<hr/> 480

Duration of Illness.—The duration of illness according to patients' own estimate at time of notification was as follows:—

Months,	-1	1-2	2-3	3-6	6-9	9-12	12-18	18-24	24 & over.	Not Known.	Total.
Pulmonary,	36	31	39	60	53	11	45	10	102	28	415
Non-Pulmonary,	76	69	47	89	46	16	39	11	83	4	480

It will again be noticed from the above figures that a large number of the cases are not notified for a considerable period after the onset of symptoms.

Home Conditions.—The following tables show the number of apartments and types of houses occupied by the patients and their families:—

Pulmonary Cases—

Apartments.	Tenement.	Cottages.	Row.	Institutions.	Total.
1	44	8	64	—	116
2	91	17	83	—	191
3	21	23	5	—	49
4	6	6	—	—	12
Over 4	1	31	—	15	47
					<u>415</u>

Of the 415 cases recorded, 116 resided in houses of a single apartment, 191 of two apartments, 49 of three apartments, and 44 of four

or more apartments, while 15 were institution cases. The total number of persons in each class of house, with the average number per house and per room, were :—

Apartments.	1	2	3	4 and over
Total inmates, - - -	605	1,177	272	217
Average number per house,	5.2	6.16	5.55	4.9
„ „ per room,	5.2	3.08	1.85	under 1.2

Non-Pulmonary Cases—

Apartments.	Tenement.	Cottages.	Row.	Institutions.	Total.
1	60	10	88	—	158
2	97	21	97	—	215
3	21	33	10	—	64
4	8	19	1	—	28
Over 4	1	11	—	3	15
					<hr/> 480 <hr/>

Apartments.	1	2	3	4 and over.
Total inmates, - - -	751	1,439	463	257
Average number per house,	4.7	6.69	7.23	6.42
„ „ per room,	4.7	3.34	2.41	under 1.60

Institutional Treatment.—The following table shows the total number of all cases admitted and re-admitted to tuberculosis institutions. No case was sent to any institution outwith the County :—

Cases.	Shotts.	Stonehouse.	Uppertown.	Motherwell.	Lightburn.	Hairmyres.	Dalserf.	Total.
Pulmonary, 134	—	122	9	5	129	—	399	
Non-Pul-								
monary, 29	92	45	124	—	124	30	444	
	163	92	167	133	5	253	30	843

Deaths.—150 pulmonary cases and 150 non-pulmonary cases died. Of these 85 and 119 respectively were of cases notified during the year.

The pulmonary death-rate for 1924 was 5.5 per 10,000 of the population, and the non-pulmonary 5.0. The mortality for pulmonary froms is given in the following table, which shows the average annual number of deaths in each Registration District since 1891 :—

PULMONARY TUBERCULOSIS IN EACH REGISTRATION DISTRICT OF THE
MIDDLE WARD.—AVERAGE ANNUAL NUMBER OF DEATHS FOR
QUINQUENNIAL PERIODS 1891-1920, AND FOR THE YEARS 1921,
1922, 1923, AND 1924.

Registration District.	Population.	1891-1895.	1896-1900.	1901-1905.	1906-1910.	1911-1915.	1916-1920.	1921.	1922.	1923.	1924.
Avondale, -	5,902	10·2	7·4	5	7	4	3·3	6	1	2	1
East Kilbride,	4,787	4·6	6·2	5·8	5·8	4·2	4·4	3	6	1	4
Glasford, -	4,131	1·4	·8	1·2	1·2	3	·6	—	2	1	2
Stonehouse, -	4,204	4·8	6·8	4·2	2	2·4	2·2	4	3	1	1
Blantyre, -	18,154	18·2	17·6	22·2	15·6	19·3	16·1	24	12	20	15
Bothwell, -	19,904	18	14·6	17·8	14	15·3	15·1	13	12	17	17
Bellshill, -	20,934	10·6	18	13·6	15·4	16	19	13	15	18	20
Holytown, -	18,579	13·4	11·4	13·4	16·8	13	14·1	10	8	10	8
Cambuslang, -	26,130	28·4	25·4	27	19·4	24·1	25	12	16	20	12
Cambusnethan, -	12,243	13·8	7·4	9·2	9·4	11·1	8	12	12	11	10
Calderhead, -	4,007	2·2	2·8	2·8	2·6	1·4	4	1	3	2	2
Dalserf, -	4,491	3·8	1·8	4·2	2·6	2·2	2·1	2	2	5	4
Larkhall, -	14,974	12	14·2	12·6	7·4	7·3	7·4	9	5	9	3
Dalziel, -	2,023	1·8	1·2	2·4	2·4	1·2	·8	—	1	—	—
Hamilton, -	7,921	11	6·8	6	6·8	5·2	3·3	4	4	3	4
New Monkland, -	13,773	14·6	18·2	11·6	14·2	9·2	7·4	9	3	6	5
Old Monkland—											
East, -	2,435	2·2	1·2	1·8	2	2	1·4	—	2	3	1
Coatbridge, -	2,910	2·8	2·6	1·8	2·6	2·3	1·4	—	3	—	1
West, -	13,415	15·6	12	9·8	11·2	10·4	8·1	9	9	8	6
Shotts—											
East, -	4,667	2·8	2·8	1·8	3	3	2·1	2	4	2	2
Middle, -	3,605	1·2	1·6	1·6	2·2	1·1	1	2	2	1	1
Calderhead, -	6,347	3	4·2	5·2	5·4	4·2	5·2	3	—	4	8
West, -	4,660	4·6	5·8	4·8	4·6	3·1	3	2	6	2	5
North, -	1,303	2·2	2·2	1·8	1·6	1·3	1·3	—	—	1	—
TOTAL, -	218,817	203·2	193·0	187·6	175·0	168·1	161	140	131	147	132

Deaths in relation to Notification.—The table given below shows the deaths classified according to the time which elapsed between the receipt of notification and the occurrence of death, and also the deaths of unnotified cases:—

Year.	Total Cases.	Fatal Cases.		Fatal Cases Notified—Period between Notification and Death.				
		Unnotified.	Notified.	1 Month.	1-3 Months.	3-6 Months.	6-12 Months.	Over 1 Year.
1908	301	43	141	40	36	21	18	26
1909	338	52	155	36	33	27	25	34
1910	370	30	131	34	30	16	22	29
1911	336	24	161	31	30	20	29	51
1912	365	22	138	30	20	26	19	43
1913	369	26	150	35	27	30	31	27
1914	274	16	123	21	21	17	17	47
1915	327	20	144	32	21	16	25	50
1916	340	17	149	32	25	20	22	50
1917	289	31	127	20	18	18	23	48
1918	395	50	124	29	22	17	16	40
1919	366	21	125	29	23	21	21	31
1920	355	17	144	43	19	19	21	42
1921	379	10	129	27	28	17	17	40
1922	368	11	120	37	21	17	17	28
1923	422	11	136	37	25	29	15	30
1924	415	11	122	24	18	23	11	46

The proportion of cases notified only a few months before death remains high.

Of the total number of 1,524 pulmonary and 1,842 non-pulmonary cases dealt with throughout the year, the following table shows the changes which took place:—

	Cases in District on 1/1/24.	New Cases.	Total on Register.	Left District.	Died.	Off list. Disease arrested or diagnosis revised.	Cases in District on 31/12/24.
Pulmonary,	1,109	415	1,524	51	150	61	1,262
Non-Pulmonary,	1,362	480	1,842	81	150	124	1,487
	2,471	895	3,366	132	300	185	2,749

It should be noted that 18 pulmonary and 31 non-pulmonary cases died from some cause certified to be other than tuberculosis, viz. :—

Cases of tuberculosis dying and classified to causes other than tuberculosis :—

Pulmonary, 18 cases.—Bronchitis, 4; broncho-pneumonia, 2; influenzal pneumonia, 1; influenza, 1; malignant diseases, 3—larynx 1, mediastinum 1, and pancreas 1; acute rheumatism, 1; diabetes, 1; leukæmia, 1; transferred out, 2; unknown, 2.

Non-Pulmonary, 31 cases.—Measles, 7; whooping-cough, 3; chickenpox, 1; broncho-pneumonia, 2; gastro-enteritis, 1; meningitis (simple), 2; encephalitis, 1; epilepsy, 1; malignant diseases, 2—neck 1, breast 1; nephritis, 2; lymphadenoma, 1; dermatitis, 1; transferred out, 3; unknown, 4.

It is of interest to note that when tuberculosis appears as one of two causes of death, it is possible to find in the final classification that the other cause has taken preference, *e.g.*, tuberculosis in combination with malignant disease, measles, whooping-cough, or any of the diseases detailed in Groups 1 and 2 of the International List of causes of death.

New Cases.—Of the 415 cases notified for the first time, 83, or 20 per cent., gave a positive sputum result; 91, or 21 per cent., gave a negative result. In 241, or 59 per cent., no sputum examination was made, owing, *inter alia*, to many of these cases being children who had no cough or spit.

Off List—

Pulmonary Tuberculosis, 61 cases.—In 42 instances the disease was arrested and the patients had been free of symptoms for a sufficiently long period to justify the removal of their names from the register.

The diagnosis was altered as follows in 19 cases :—Bronchitis, 8; pulmonary fibrosis, non-tuberculous, 1; appendicitis, 1; tonsils and adenoids, 1; malnutrition, 1; blepharitis, 1; emphysema, 1; no apparent disease, 5.

Non-Pulmonary Tuberculosis, 124 cases.—In 86 instances the disease was regarded as arrested, and in 38 the diagnosis was altered as follows :—Goitre, 2; inguinal adenitis with sinus, 1; post-scarlatinal nephritis, 1; tonsils and adenoids, 2; acute adenitis with abscess, 1; enteritis, 2; pyogenic abscess, 1; injury (spine), 1; sebaceous cyst, 1; contusion of back, 1; alveolar abscess, 1; no apparent disease, 24.

Cases under Observation—

In spite of the removal of names from the register for various causes, the cases dealt with each year have been steadily increasing, and since 1914 the number has risen from 421 to 1,524 in the case of pulmonary tuberculosis, and from 215 to 1,842 for non-pulmonary tuberculosis.

Duration of Illness at Death.—The table given below shows the fatal cases classified according to the total duration of illness:—

Duration.	MONTHS.					YEARS.					Un-		
	1-3	3-6	6-12	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10 known.
Pulmonary, - -	5	14	22	25	17	15	11	4	6	1	2	1	13
Non-Pulmonary, -	63	19	28	18	9	2	1	3	1	2	—	1	2

Family History of Tuberculosis.—Of the 415 pulmonary cases and the 480 non-pulmonary cases brought to notice during the year a family history of tuberculosis was obtained, as follows:—

	Cases with Tuberculosis in other members of family.	Cases with Tuberculosis in other relatives.	Percentage of cases with positive family history.
Pulmonary, - - -	127	28	30.5
Non-Pulmonary, - -	107	46	31.8

Domiciliary and Dispensary Treatment.—Cases suitable for treatment at home, or who could not for any reason receive institutional treatment, were kept under observation by the Tuberculosis Officers and Nurse Inspectors, the latter of whom paid 21,325 visits during the course of the year. Patients remaining at home were encouraged to attend at the Tuberculosis Dispensaries, where they were kept under careful observation, had their weights recorded, and received medical examination from time to time. Five dispensaries—situated at Bellshill, Blantyre, Cambuslang, Larkhall, and Shotts were in use, and the table below gives a record of the attendances:—

	New Cases.	Revisits.
Bellshill, - - - - -	229	631
Blantyre, - - - - -	114	793
Cambuslang, - - - - -	176	1,271
Larkhall, - - - - -	306	891
Shotts, - - - - -	90	501
	—	—
	915	4,087

During the year 274 cases received additional nourishment in the form of milk, eggs, butcher meat, and butter, at a total cost of

£1,566 10s. In addition, supplies of malt and cod-liver oil were provided for those and other cases.

Discharged Tuberculous Soldiers.—Among the cases notified for the first time during 1924 there were 20 discharged soldiers, 18 suffering from the pulmonary and 2 from non-pulmonary forms of the disease. The relationship of the disease to military service is summarised, according to the Ministry of Pensions, thus:—Attributable to service, 10; aggravated by service, 3; non-attributable, 6; undecided, 1.

Institutional treatment—in sanatorium or farm colony—was given to 7 cases, while in 5 instances such treatment was offered but refused; 3 cases were considered unsuitable for admission to institution, 1 left district shortly after notification, and 4 were waiting treatment towards the end of the year.

The total number of ex-service men dealt with throughout the year as suffering from tuberculosis was 129. In addition to domiciliary visits made to those cases by the Tuberculosis Officers and attendances made by the men at the dispensaries, 473 home visits were made by Nurse Inspectors—*i.e.*, 2·2 per cent. of the total visits paid by them.

Institutional Treatment.—The work at the various institutions dealing with cases of tuberculosis is described by the respective Physician-Superintendents in the institutional reports.

Refractories Industries (Silicosis) Scheme, 1919.

Seven examinations (3 males and 4 females) were carried out at the Birkenshaw Brick Works, Larkhall, and careful records were made of the conditions found. This is the only work in the Middle Ward which comes under the scheme.

County Sanatorium, Shotts.

Physician-Superintendent—JOHN A. C. GUY, M.B., Ch.B., D.P.H.

Visiting Physician—JOHN M'MILLAN, M.B., Ch.B.

Matron—Miss KEIR.

BUILDINGS AND GROUNDS.—During the year the gates and railings surrounding the institution were removed, and replaced by new gates, with improved entrances and a closed galvanised fencing. The result has been gratifying, not only in adding to the amenity of the Sanatorium, but in facilitating the entrance of motor vehicles and procuring a degree of privacy within the grounds hitherto unknown.

ACCOMMODATION.—This remains unchanged, and consists of 46 beds and 8 cots. Of the beds, 30 are allocated for males and 16 for females, but the relative proportion varies from time to time, according to the number of patients of each sex requiring institutional treatment.

STAFF.—Medical staff is non-resident, and remains unchanged. Nursing staff:—2 sisters, 2 staff nurses, and 5 probationers. Domestic staff:—1 cook, 1 laundress, and 7 maids. Outdoor staff:—1 gardener-attendant, 1 assistant gardener, and 1 fireman.

ADMISSIONS AND DISCHARGES.—155 patients were admitted, and 151 discharged during the year. In addition there were 47 patients in residence at the commencement of the year, and 51 at the end of the year.

PLACE OF RESIDENCE.—**MIDDLE WARD.**

Blantyre, - - - -	15	Dalziel, - - - -	2
Bothwell, - - - -	55	Hamilton, - - - -	4
Cambuslang, - - - -	22	New Monkland, - - - -	9
Cambusnethan, - - - -	8	Old Monkland, - - - -	17
Dalserf, - - - -	4	Shotts, - - - -	12
East Kilbride, . - - -	1		— 149

OTHER DISTRICTS.

<i>Burghs</i> — Rutherglen, 1 ; Airdrie, 1, - - - -	2
Total, - - - -	<u>151</u>

AGE AND SEX ANALYSIS.

Quinquen. Periods.	Male.	Female.	Both Sexes.	Age Groups.	No.	Pulm.	Non- Pulm.	Non- Tub.	Doubtful.
1-5	9	7	16	Pre-School,	16	4	11	—	1
5-10	6	4	10	School, -	28	20	7	—	1
10-15	5	13	18						
15-20	6	11	17	Adolescence,	32	29	3	—	—
20-25	5	10	15						
25-30	7	7	14	Early, Maturity	52	39	7	—	6
30-35	13	7	20						
35-40	6	2	8						
40-45	6	4	10	Late Maturity,	23	18	—	—	5
45-50	5	3	8						
50-55	9	1	10						
55-60	1	1	2						
60-65	3	—	3						
Total,	81	70	151		151	110	28	—	13

DURATION OF RESIDENCE, in days, of all cases:—Average, 125; maximum, 1,744; minimum, 3.

Cases under treatment during the year were of the following type and numbers:—(a) Pulmonary tuberculosis, 110; (b) non-pulmonary tuberculosis, 28; and (c) doubtful tuberculosis (pulmonary), 13.

(a) PULMONARY TUBERCULOSIS—

(i) Cases classified according to duration of illness prior to admission:—

Months,	1-3	3-6	6-12	12-18	18-24	Over 24.	Indefinite.	Total.
Cases,	14	13	11	7	13	40	12	110

(ii) Classified according to earliest manifestations of disease:—

Cough and spit, 52; hæmoptysis, 12; pneumonia, 10; influenza, 8; bronchitis, 8; pleurisy, 6; pain in chest, 4; gassed, 2; general debility, 2; cervical adenitis, 2; anæmia, 1; conjunctivitis, 1; vomiting, 1; and debility following pregnancy, 1.

(iii) Cases grouped under a modification of the Turban-Gerhardt classifications:—

	Number of Patients.	Disease Arrested.	Improved.	Stationary.	Worse.	Died.
Group I, - - -	53	—	46	7	—	—
Group II, - - -	24	—	17	6	1	—
Group III, - - -	33	—	1	3	6	23
Total, - - -	110	—	64	16	7	23

(iv) *Complications*.—43 cases showed complications, grouped as follows :—

(a) *Tuberculous Complications*.—Laryngitis, 5; cervical adenitis, 3; enteritis, 3; kidney, 2; abscess, 1; conjunctivitis, 1.

(b) *Non-Tuberculous Complications*.—Anæmia, 24; cardiac, 1; empyema, 1; nasal obstruction, 1; insanity, 1.

(v) *Sputum Examinations*.—41 cases had positive spits, 56 proved negative, and 13 had no sputum. The following table shows sputum analysis according to groups :—

	TB+	TB-	No Spit.
Group I, - - - - -	7	37	9
Group II, - - - - -	10	12	2
Group III, - - - - -	24	7	2
Total, - - - - -	41	56	13

(b) *NON-PULMONARY TUBERCULOSIS*.—Number of cases, 28, grouped as follows :—Abdominal, 12; bones and joints, 7; cervical adenitis, 4; skin, 4; organs, 1.

Abdominal.—12 cases. The cases were all children, ranging in ages from 10 months to 12 years. Diarrhœa complicated several cases. In three cases the diagnosis of tuberculosis was doubtful, and in these cases malnutrition and neglect were in all probability the causative agents necessitating admission to hospital. Two cases developed chickenpox, one developed whooping-cough, and another tuberculous meningitis, and these necessitated transfer to the County Hospital, Motherwell. The remainder improved under treatment, and the results in general were satisfactory.

Bones and Joints.—7 cases. The location of the disease in three cases involved the hip joint, two of which were complicated with discharging sinuses. These improved considerably, and were eventually transferred to Dalserf Hospital for further treatment. The other case was of many years' duration, and after much improvement in general health, was transferred to Hairmyres for Colony treatment. Two cases involving ankle joints, although much improved, were transferred to Stonehouse for further treatment. In the remaining two cases the disease in one instance was

located in the knee joint, and on developing a popliteal abscess, the patient was transferred to Stonehouse for operation. In the other case the disease had originated in the ankle joint, which had been amputated some years prior to admission. The patient, who had been admitted for reasons of ill-health, was subsequently discharged greatly improved.

Cervical Adenitis.—4 cases. The cases, with one exception, were young children, and in all the results were satisfactory. There was considerable improvement in general health in every case.

Skin.—4 cases. All the cases were lupus, involving the face. In one instance there was further involvement of the hand, and this case was transferred to Motherwell for amputation of fingers. One case was transferred to Hairmyres Colony for arc-lamp treatment. On the whole, the results obtained were good and every case showed marked improvement.

Organs.—1 case. The site of the lesion involved the kidney. No tubercle bacilli were found in the urine, and the case was eventually discharged greatly improved in general health.

- (c) DOUBTFUL TUBERCULOSIS.—PULMONARY.—13 cases. Eight cases showed signs of chronic bronchitis. In the remainder no signs of tuberculosis were obtained, and they were, with one exception, discharged greatly improved in health. The exception was a case of empyema with chronic discharging sinus, and was transferred to Motherwell Hospital for further operative treatment.

County Sanatorium, Stonehouse.

Resident Physician-Superintendent—J. R. SUTHERLAND, M.B.,
Ch.B., B.Sc., D.P.H.

Visiting Physician—A. H. M'LEAN, M.B., C.M.

Dental Surgeon—J. HAY CAMPBELL, L.D.S.

Matron—Miss ANNIE SHORE.

BUILDINGS AND GROUNDS.—The buildings were improved in several ways during the year; for example, by roofing the concrete verandahs attached to Pavilions II and III, and introducing a system of heating by hot-water radiators throughout the latter pavilion. The trouble experienced hitherto in this pavilion from dampness was so removed, while the covering of the verandahs added considerably to their usefulness, by permitting patients to receive open-air treatment in states of weather previously impossible.

As glass pervious to the ultra-violet rays of the sun was not obtainable at the time the roofs were formed, care was taken in designing them that patients could still be exposed while on the verandahs to direct sunlight. In Pavilion III this was rendered possible by extending the concrete flat five feet beyond the outer margin of the roof. In Pavilion II, where the position of the drains and the height of the verandah from the ground prevented a similar mode of treatment, the central half alone was roofed, the extremities being left entirely open. Now the stronger patients can receive open-air treatment both day and night during most of the year, and the space in the ward vacated by them affords more room for those remaining inside, who were formerly overcrowded.

About one-half of the area of the verandah roofs is formed of ordinary wire-woven glass, so disposed as to allow the maximum amount of light to enter the wards. The rest of the roof is formed, in one pavilion, of asbestos tiles, and in the other of slates. The verandahs themselves are well lit, and not so hot in sunny weather as they would be if the roofing were entirely of glass.

EQUIPMENT.—In September, 1923, the Scottish Board of Health approved of the Committee's desire to provide an X-ray apparatus at the sanatorium. For sundry reasons, however, the necessary plant

was not installed till May, 1924. It consists, *inter alia*, of a $3\frac{1}{2}$ kw. dynamo, driven from the fly-wheel of the existing engine, a storage battery of 150 volts, a gas interrupter and rectifier, a 16-inch coil, four tungsten gas tubes, and a table with lead protective box below. Pending the completion of an X-Ray Department, designed in collaboration with the staff of the National Physical Laboratories, and at present in course of erection, the disused garage was utilised as a combined X-ray and developing room. As the garage is only 9 feet by 13 feet, this arrangement is not free from objection, yet it has been of great value in adding to the accuracy of the treatment and diagnosis of the diseases dealt with.

It might be mentioned here that in July, 1921, the Committee, being convinced of the need of introducing electricity to the Institution, both for lighting and medical purposes, obtained a report from Consulting Engineers how best this could be done, and thereafter approached the Board of Health for its approval of the scheme. The Board, while recognising the merits of the scheme, postponed approving of it until the County and Burghs of Lanark would agree to the formation of a Joint-Committee for the treatment of tuberculosis in their combined areas. The object of installing a generating and storage apparatus in May, 1924, was therefore to afford a source merely for X-rays; and the equipment installed has not the power either to light the Institution or to work those appliances now in vogue for the supply of artificial sunlight, and almost indispensable in a climate like ours so poor in natural sunlight.

ACCOMMODATION.—In all, there are 80 beds and cots available in three pavilions for the treatment of surgical tuberculosis. Patients are not admitted for the treatment of pulmonary tuberculosis.

STAFF.—The male staff consists, as formerly, of a visiting physician, a resident medical officer, an engineer, two gardeners, and a fireman. The nursing staff comprises a matron, three general trained sisters, and nine probationer nurses on day duty; one sister and three probationer nurses on night duty. The domestic staff includes a cook, a laundrymaid, and nine other maids.

In May, 1924, Miss Agnes H. Easton was appointed teacher at the sanatorium, where many of the children were illiterate, some, although of school age, never having been at school at all, others at such long intervals as to have derived little benefit from the tuition they had received there. The children at the sanatorium, averaging daily about 50, now receive instruction suited to their age and condition,

in reading, writing, arithmetic, and kindergarten; and the results obtained have been very satisfactory, as will be seen from the following excerpt from a report made in May, 1925, by His Majesty's Inspector of Schools, which may conveniently be inserted here:—

“I visited the sanatorium to-day, and found the teacher doing good work. . . . The children are practically all confined to bed; many of them are unable to sit up, and a great deal of the work is necessarily individual. I found that all of them were learning something, and some of them a great deal. The teaching is sympathetic and earnest, and Miss Easton's personal qualifications for work of this kind are good. The arrangement of children in wards is based, so far as possible, on their intellectual level, and thus a certain amount of collective teaching can be done. The girls do some knitting and crochet work, and it is proposed to give some form of hand-and-eye work to boys also. I have no hesitation in saying that Miss Easton is giving quite full value for the salary she receives. There is really work for more than one teacher in the Institution, as there are over fifty children receiving education.”

PATIENTS TREATED.—During the year 119 patients were admitted, and 117 were dismissed. At the end of the year there were under treatment 79 patients.

PLACE OF RESIDENCE.—From the table which follows it will be noted that the patients dismissed came from the Middle Ward, and the Burghs of Airdrie, Hamilton, and Rutherglen.

MIDDLE WARD.

Parish.	No. of Patients.	Parish.	No. of Patients.
Avondale, - -	4	East Kilbride, -	1
Blantyre, - -	4	Hamilton, - -	10
Bothwell, - -	19	Old Monkland, -	3
Cambuslang, - -	4	Shotts, - - -	4
Cambusnethan, -	1	Stonehouse, - -	23
Dalserf, - - -	39		
		Total, - - -	112

BURGHs.

	No. of Patients.
Airdrie, - - - -	2
Hamilton, - - - -	2
Rutherglen, - - -	1
—	Total, 5
Grand Total, -	117

DIAGNOSIS.—108 patients were found to be suffering from tuberculous disease, and 9 from one of the following diseases:—Lymphadenoma, sarcoma of the tibia, congenital dislocation of the hip-joint, rheumatoid arthritis of the knee-joints, exostosis of the tibia, pleural empyema, osteomyelitis of the jaw, and of the femur (2 cases).

AGE AND SEX.

Years.	Male.	Female.	Both Sexes.	Age Group.
- 3	5	6	11	21 Under School age
- 5	6	4	10	
- 10	15	15	30	50 School age.
- 15	5	15	20	
- 20	5	10	15	22 Adolescent.
- 25	2	5	7	
- 30	4	2	6	10 Early Maturity.
- 35	—	1	1	
- 40	2	—	2	
- 45	—	1	1	
- 50	1	1	2	5 Late Maturity.
- 55	—	1	1	
- 60	—	1	1	
- 65	—	1	1	
Total,	45	63	108	

SITE OF LESION, RESULT OF TREATMENT, AND DURATION OF TREATMENT.

I. OSSEOUS SYSTEM.	No. of Cases.	Cured.	Imp.	I.S.Q.	Worse.	Died.	Average Duration of Treatment in days.
<i>Spine—</i>							
Cervico-dorsal Region,	2	2	—	—	—	—	640
Upper „	4	3	—	1	—	—	213
Mid „	2	1	—	1	—	—	269
Lower „	1	—	1	—	—	—	1,054
Dorso-lumbar „	2	1	1	—	—	—	320
Lumbar, - - -	1	—	—	—	—	1	574
<i>Cranium</i> (parietal bone),	1	1	—	—	—	—	188
<i>Sternum</i> , - - -	3	2	—	1	—	—	113
<i>Rib</i> , - - -	2	—	—	2	—	—	1
<i>Femur</i> , - - -	2	1	—	1	—	—	60
<i>Tibia</i> , - - -	1	1	—	—	—	—	109
<i>Radius</i> , - - -	1	1	—	—	—	—	78
<i>Phalanx</i> , - - -	2	1	1	—	—	—	60

								Average Duration of Treatment. in days.
II. ARTICULAR SYSTEM.								
No. of Cases.	Cured.	Imp.	L.S.Q.	Worse.	Died.			
<i>Sacro-iliac joint,</i>	-	-	1	—	1	—	—	1,001
<i>Hip-joint,</i>	-	-	7	6	—	1	—	575
<i>Knee-joint,</i>	-	-	8	7	—	—	1	337
<i>Ankle-joint,</i>	-	-	2	1	—	—	—	195
<i>Shoulder-joint,</i>	-	-	1	1	—	—	—	504
<i>Elbow-joint,</i>	-	-	2	1	—	1	—	136
III. LYMPHATIC SYSTEM.								
<i>Cervical glands,</i>	-	-	53	30	20	2	—	1 58
<i>Peritoneum,</i>	-	-	6	3	—	2	—	1 60
IV. CUTANEOUS SYSTEM,								
	-	-	2	1	1	—	—	— 126
V. GENITO-URINARY SYSTEM.								
<i>Testicle,</i>	-	-	1	—	1	—	—	— 1
<i>Bladder,</i>	-	-	1	—	—	1	—	— 2

NOTES.

There is little improvement in the type of patient admitted for treatment of osseous and articular tuberculosis. Too many still arrive in an advanced stage of the disease, badly deformed, and suffering from septic intoxication. Such patients may recover, but even so their recovery is always very slow, and often far from satisfactory. Their admission to an institution already crowded has several embarrassing results. It aggravates that state of crowding, defers unduly the admission of patients in a more hopeful stage of disease, and tends to the dismissal of others before they are completely cured. Dismissed in this way several have relapsed. A brief history of three cases may serve to illustrate some of these points:—

Case I.—A male, aged 36 years, developed spinal tuberculosis in 1913. A year later double psoas and lumbar abscesses formed. All were incised in one of the Glasgow infirmaries. A year later patient was admitted to sanatorium markedly blood poisoned. Before he could be dismissed 1,054 days' treatment was required. Even then, although much improved, he still had four sinuses, and could only be regarded as an invalid for the rest of his life.

Case II.—A female, aged 41 years, developed an abscess in the right iliac region, due to spinal tuberculosis. This abscess was incised by the doctor in attendance. A year and a-half later patient was admitted to sanatorium suffering from chronic toxæmia. Incurable from admission, she died 574 days later, sanatorium treatment having served merely to prolong her illness.

Neither of these cases had received treatment by spinal rest and aspiration of abscesses. Their prospects of recovery were consequently ruined.

Case III.—A lad, 16 years of age, was admitted for treatment of hip-joint disease of five months' duration, and tuberculous disease of glands of the neck of six years' duration. For the latter affection he had been operated on nineteen times in a general infirmary, and yet there was a large pointing abscess of the neck. No open-air treatment had ever been given. When he was dismissed from sanatorium after 593 days' treatment the neck was healed, and the hip-joint disease apparently cured. Treatment had consisted in aseptic dressing of a sinus which followed rupture of the abscess of the neck, immobilising of the affected hip-joint, and aspiration of a crural abscess which had formed. This patient was dismissed to make room for another urgently in need of treatment. It was recognised that the duration of treatment was rather short for such a severe infection. Two months later pain recurred in the hip, and the lad had to be readmitted.

The treatment used throughout the year was as formerly, whenever possible, of a conservative nature.

For articular tuberculosis only two major operations were performed, viz., amputation of the leg, and these both in patients with open lesions, and over 40 years of age, when recuperative power is largely lost.

At every opportunity natural heliotherapy was employed, and open-air treatment in all suitable weather.

In the immobilisation of joints, extension, plaster of Paris, and Jones' splints were used, the first and last particularly in younger patients.

Several celluloid splints, mostly in the form of spinal jackets, were made for patients convalescing in the Institution, or attending it as outdoor patients. Where a plaster of Paris support seemed suitable, it was employed as being less expensive in time and money.

In cervical adenitis attention was concentrated in improving the patients' general health, and eliminating foci of infection. Here the services of the dentist were of great value, and much assistance could have been obtained from a specialist in diseases of the ear, nose, and throat. Where the glands were fluctuant, they were either aspirated or incised. Rarely in monoglandular cervical adenitis was excision performed, and mainly for cosmetic reasons. The length of treatment given to these patients is at present unavoidably too short.

County Hospital, Dalserf.

Physician-Superintendent.—J. R. SUTHERLAND, M.B., Ch.B.,
B.Sc., D.P.H.

Matron—Miss MORE.

BUILDINGS AND GROUNDS.—The buildings have been kept in a good state of repair by the Works Department, and the grounds have been well attended to by the gardener.

ACCOMMODATION AND STAFF.—The hospital has two wards containing 16 beds, reserved solely for the treatment of non-pulmonary tuberculosis, and is run to a large extent in conjunction with the County Sanatorium, Stonehouse.

The staff consists of a matron, who is a fully trained nurse, two probationer nurses, one cook, one maid, and a non-resident gardener.

ADMISSIONS AND DISCHARGES.—31 patients were admitted during the year, and 30 dismissed. At the beginning of the year there were 16 patients under treatment, and 17 at the end.

PLACE OF RESIDENCE.—With one exception, all the patients came from the Middle Ward, as the following table shows :—

Parish.	No. of Patients.	Parish.	No. of Patients.
Avondale, - -	3	Dalserf, - -	13
Blantyre, - -	1	Hamilton, - -	3
Bothwell, - -	6	Shotts, - -	3
			<hr/>
		Total, - -	29
Burgh of Airdrie, - -	-	- -	1
			<hr/>
		Total, - -	30
			<hr/>

DIAGNOSIS.—27 of these patients appeared to be suffering from some form of non-pulmonary tuberculosis, one from lymphatic leuchæmia, one from chronic articular rheumatism, and one from an old undetected fracture of the collar bone.

Age and Sex Distribution.

Years.	Males.	Females.	Total.
- 5	3	3	6
- 10	7	3	10
- 15	1	4	5
- 20	2	—	2
- 25	1	—	1
- 30	1	—	1
- 35	—	—	—
- 40	1	—	1
- 45	1	—	1
Total,	17	10	27

Site of Lesion and Length and Result of Treatment.

	No. of Cases.	Cured.	Imp.	I.S.Q.	Worse.	Died.	Average Duration of Treatment in days.
I. OSSEOUS SYSTEM.							
Dorsal spine, - - -	1	—	—	1	—	—	11
Rib, - - - -	1	—	—	—	1	—	103
Metatarsal bone and sternum, 1	—	1	—	—	—	—	227
Olecranon, - - -	1	1	—	—	—	—	177
II. ARTICULAR SYSTEM.							
Hip-joint, - - -	3	2	—	—	—	1	117
Knee-joint, - - -	1	—	1	—	—	—	350
III. LYMPHATIC SYSTEM.							
Cervical glands, - - -	7	5	1	1	—	—	130
Axillary glands, - - -	1	—	1	—	—	—	23
Peritoneum, - - -	10	8	1	1	—	—	118
IV. GENERATIVE SYSTEM.							
Testicle, - - -	1	1	—	—	—	—	190
Total, -	27	17	5	3	1	1	

OSSEOUS SYSTEM.—The only patient suffering from spinal caries was transferred after 11 days to Stonehouse Sanatorium for completion of treatment.

A patient with costal tuberculosis failed to improve, as the disease was complicated with advanced pulmonary tuberculosis.

A male, 43 years of age, showed on admission tuberculous osteitis of the sternum, and of the phalanx of the great toe. The metapalangeal joint became involved in the rapid spread of the disease, and accordingly the toe was amputated with part of the phalanx. 227 days later patient was dismissed at his own request with the foot perfectly healed and the sternum almost cured.

A boy, 8 years of age, had on admission a sinus leading from the olecranon of the ulna. The osseous lesion was then in process of repair, and 117 days' treatment sufficed to complete the cure.

ARTICULAR SYSTEM:—

Hip-joint.—Of the 3 cases with this disease, one, a boy, aged 9 years, died 133 days after admission from meningitis. The other two, girls, aged 4 years each, were almost well before admission, having received sanatorium treatment elsewhere, and were dismissed cured in periods of 138 and 80 days. One had a crural abscess which several aspirations completely dissipated.

Knee-joint.—The only case was transferred to Stonehouse Sanatorium, when the joint, which had resisted straightening by extension, was straightened under chloroform, and fixed in that position in plaster of Paris.

LYMPHATIC SYSTEM:—

Cervical Adenitis.—7 cases were treated, with 5 recoveries. One case was transferred to Stonehouse Sanatorium for further treatment. One was dismissed improved, and has since made a good recovery.

Axillary Adenitis.—A case was transferred to Stonehouse Sanatorium on the grounds of convenience.

Peritoneum.—Two patients left the Institution after a residence of 8 and 55 days, and before treatment was completed. The remaining 8 were all dismissed well. All had been admitted in a very poor condition generally. One had peritonitis of the ascitic variety, another of the plastic. In these the diagnosis of tuberculosis was definite. In 6 cases it was only suspected.

GENERATIVE SYSTEM.—A patient, 25 years of age, was admitted from Stonehouse Sanatorium after amputation of the testicle. The patient was dismissed well 190 days later

County Sanatorium, Uppertown, Longriggend.

Physician-Superintendent—J. M'CALLUM LANG, M.D., D.P.H.

Visiting Physician—RICHARD RAE, M.B., Ch.B., D.P.H.

Matron—Miss STEWART.

BUILDINGS AND GROUNDS.—It was agreed to erect a milk-house and coal cellar in the form of annexes to the administrative block, and building was begun during the year. The lighting plant was repaired, and a braking mechanism provided to obviate accidental unwinding. Various minor repairs were carried out by the Works Department in a most satisfactory manner.

ACCOMMODATION.—This remains unchanged, and consists of 37 beds and 15 cots. Of the beds, 16 are allocated to males and 21 to females, but these proportions may be varied from time to time.

STAFFING.—The medical staff is non-resident and remains unchanged. *Nursing Staff*—Matron, 1 sister, 3 staff nurses, and 5 probationers. *Domestic Staff*—1 cook, 2 laundrymaids, and 7 maids. *Outdoor Staff*—1 gardener-attendant (resident) and 2 assistant gardener-firemen.

ADMISSIONS AND DISCHARGES.—The patients in residence at the beginning of the year numbered 45, and during the year 172 were admitted, making the total under treatment 217. 148 patients were discharged and 20 died, leaving 49 still in residence on 31st December.

PLACE OF RESIDENCE.—Of the total cases discharged, 163 resided in the Middle Ward District, the place of residence according to parish being as follows:—

Blantyre, - - -	12	Dalserf. - - -	4
Bothwell, - - -	65	Hamilton, - - -	6
Cambuslang, - - -	12	New Monkland, - - -	18
Cambusnethan, - - -	1	Old Monkland, - - -	27
Dalziel, - - -	2	Shotts, - - -	16
		Total, - - -	163

The remaining 5 cases were admitted from the Burghs of
Airdrie, 1; Hamilton, 2; Rutherglen, 2, - - - - 5

168

AGE AND SEX.—In the following table the cases are shown classified according to age and sex, and according to age-groups for both sexes, each age-group also containing the pulmonary, non-pulmonary, and non-tuberculous cases referable to it:—

Quinquennial Periods.	Males.	Females.	Both Sexes.	Age-Groups.	Pulm.	Non-Pulm.	Non-Tub.
- 5	18	12	30	Pre-School Age, 30	3	14	13
- 10	6	12	18	School Age, 34 {	1	10	7
- 15	3	13	16		7	6	3
- 20	8	11	19		12	5	2
- 25	9	9	18	Adolescence, 37 {	13	3	2
- 30	4	7	11		10	—	1
- 35	8	4	12		12	—	—
- 40	8	4	12	Early Maturity, 50 {	10	1	1
- 45	12	3	15		11	3	1
- 50	7	1	8		8	—	—
- 55	2	2	4	Late Maturity, 17 {	3	—	1
- 60	3	1	4		1	1	2
- 65	—	—	—		—	—	—
- 70	1	—	1		1	—	—
	89	79	168		168	92	43
						43	33

Note. — Twelve cases of suspected pulmonary tuberculosis are included as pulmonary tuberculosis, and belong to the following age-groups:—Pre-school, 3; school, 3; adolescence, 4; early maturity, 1; late maturity, 1.

DURATION OF RESIDENCE.

RESIDENCE IN DAYS.

	Maximum.	Minimum.	Average.
Pulmonary, - -	875	5	107
Non-Pulmonary, - -	473	3	114

RESIDENCE IN MONTHS.

	0-1	1-3	-6	-9	-12	-18	Over.
Pulmonary, - -	17	37	27	4	2	4	1
Non-Pulmonary, -	12	11	11	5	1	3	—

PULMONARY CASES.

DURATION OF ILLNESS.—The duration of illness recorded at the time of admission, and stated in monthly periods, was as follows:—

Months, - -	1-3	3-6	6-12	12-18	18-24	Over 24	Total.
Group I, - -	2	1	4	1	- -	4	12
Group II, - -	3	2	7	4	2	22	40
Group III, - -	5	1	6	1	4	11	28
Suspect, - -	—	—	—	—	—	—	12
	10	4	17	6	6	37	92

Apart from cases in which the diagnosis was definitely altered, there were 12 where the diagnosis of tuberculosis was neither confirmed nor excluded. In some instances the duration of residence was too short to permit of a definite opinion being formed; in others, and especially children, a latent infection existed, but could not be located.

GENERAL RESULTS OF TREATMENT.—The general condition of the cases on discharge is shown in the following tabular statement:—

	Number.	Quiescent.	Imp.	Stat.	Worse.	Died.
Group I, - -	12	5	7	—	—	—
Group II, - -	40	1	37	2	—	—
Group III, - -	28	—	6	4	6	12
Suspect, - -	12	—	6	4	—	2
	92	6	56	10	6	14

It will be noted that two of the suspect cases died, the certified causes of death being miliary tuberculosis and tuberculous meningitis. These cases are of interest, and are described briefly in the following notes:—

A female child, aged 2 years, was admitted to sanatorium in October, 1923, with a history of debility following measles and whooping-cough in early infancy. Two months prior to admission the child became listless and somewhat pallid; there were no focalising symptoms and there was no loss of weight. On admission the child was fairly well nourished, rather anæmic, and with a general appearance suggestive of tuberculosis. Beyond an impaired percussion note and poor R.M. at the base of the right lung, no abnormal signs were detected. She soon improved in weight, colour, and vigour, and was running about freely when she took to bed during the eighteenth week of residence. The child developed slight fever, vomited, and was listless. Meningeal symptoms appeared, and she died 17 days later, the certified cause of death being tuberculous meningitis.

J. B., aged 3 years, was in sanatorium for four months in 1922. The child had been in poor health since early infancy, and suffered from gastro-intestinal symptoms. She was anæmic, poorly nourished, showed no definite evidence of tuberculosis, and was rachitic. She improved rapidly, and was dismissed well, although under weight. On readmission, in October, 1923, her general condition was poor, and she had not gained weight during the preceding eight months. No new symptoms had developed, and she made good progress, with occasional daily spikes of temperature during the twelfth and thirteenth weeks. After 22 weeks' residence, slight evening fever was noted. She complained of headache and of being tired. She died 14 days later, the certified cause of death being miliary tuberculosis.

It is of interest to observe that two children showing no evidence of active tuberculosis, and treated under sanatorium conditions, should die from disseminated tuberculosis after more than four months' residence.

SPUTUM EXAMINATION.—The results of examination of spit were:—

	T.B.+	T.B.—	No Spit.
Group I, - - - -	—	4	8
Group II, - - - -	13	23	4
Group III, - - - -	24	3	1
	<hr/> 37	<hr/> 30	<hr/> 13

In the 12 suspect cases, there was either no spit or a negative result was obtained.

TRANSFERS TO OTHER INSTITUTIONS.—At the end of their period of sanatorium treatment, 47 cases were transferred to other institutions, as follows:—Hairmyres, 35; County Hospital, Motherwell, 12.

ALTERED DIAGNOSIS.—In 33 cases the diagnosis was altered as follows:—No apparent disease, 7; pneumonia apical 1, convalescent 1, unresolved 1; bronchitis, 2; pulmonary fibrosis, 2; empyema, 2; tonsils and adenoids, 2; nasal obstruction, 1; boils, 1; whitlow, 1; perinephritic abscess, 1; eczema capitis, 1; malnutrition (non-tuberculous), 3; rickets, 1; debilitated contact, 1; debility following measles, 1; enteritis, 2; septic adenitis, 1; in with mother, 1.

NON-PULMONARY TUBERCULOSIS.

The cases discharged numbered 43, and were classified as follows:—Abdominal, 23; glandular, 9; spine, 3; hip, 1; wrist, 1; femur, 1; dactylitis, 1; multiple bones, 1; keratitis, 3.

Hairmyres Colony.

REPORT BY THE RESIDENT PHYSICIAN-SUPERINTENDENT, JAMES JOHNSTONE, M.B., Ch.B., D.P.H.

FOR THE YEAR 1924.

PATIENTS TREATED.

The number of patients under treatment during the course of the year is shown in the following tabular statement:—

In Residence 1st January.	Admitted During Year.	Discharged During Year.	In Residence 31st December.
219	317	315	221

PATIENTS CLASSIFIED ACCORDING TO PLACE OF RESIDENCE.

(a) *Middle Ward.*

Blantyre, - - - -	24	East Kilbride, - - -	1
Bothwell, - - - -	96	Hamilton, - - - -	7
Cambuslang, - - -	40	New Monkland, - - -	12
Cambusnethan, - - -	5	Old Monkland, - - -	11
Dalserf, - - - -	16	Shotts, - - - -	21
Dalziel, - - - -	6	Total, - - -	239

(b) *Other Districts and Burghs in County.*

Lower Ward, - - -	3	Rutherglen, - - -	9
Airdrie, - - - -	14	Hamilton, - - - -	24
		Total, - - -	50

(c) *Outwith the County.*

Ayrshire, - - - -	2	Nairn, - - - -	1
Berwickshire, - - -	2	Sheffield, - - - -	1
City of Glasgow, - - -	9	Stirlingshire, - - -	1
Dunbartonshire, - - -	9	Stornoway, - - - -	1
		Total, - - -	26

NATURE OF DISEASE.

Of the 315 patients discharged during the year under consideration, 301 proved to be tuberculous, in 170 cases the disease assuming the pulmonary form, while in 131 it was non-pulmonary. The diseases affecting five cases were as follows:—Asthma, 2; bronchiectasis, 1; bronchitis, 1; tumour of lung, 1. In the other nine cases no tuberculous lesion was detected.

In the statistics which follow only 301 patients—discharged during the year—who proved to be tuberculous, are referred to.

SOCIAL CONDITIONS.

	1 Apt.	2 Apts.	3 Apts.	4 Apts.	5 and over.	Total.
Men, - -	41	62	14	6	2	125
Women, - -	5	5	3	3	1	17
Boys, - -	28	45	5	2	—	80
Girls, - -	25	47	6	—	1	79
Totals, - -	99	159	28	11	4	301

OCCUPATIONS.

Miners, - - - -	46	Student, - - - -	1
Artisans, - - - -	54	Fisherman, - - - -	1
Salesmen, - - - -	4	Vanman, - - - -	1
Clerks, - - - -	2	Signalman, - - - -	1
Dustman, - - - -	1	Railway Guard, - - - -	1

It is interesting to note that the great majority of the patients are miners or artisans.

PULMONARY TUBERCULOSIS.

AGE AND SEX DISTRIBUTION.

Quinquennial Periods.	Males.	Females.	Both Sexes.	Age Groups.
Under 5, - -	1	1	2	Pre-School Age.
„ 10, - -	6	11	17	School Age.
„ 15, - -	18	13	31	
„ 20, - -	19	3	22	Adolescence.
„ 25, - -	22	4	26	
„ 30, - -	14	5	19	Early Maturity
„ 35, - -	17	1	18	
„ 40, - -	9	1	10	
„ 45, - -	10	—	10	
„ 50, - -	8	—	8	Late Maturity.
„ 55, - -	6	—	6	
„ 70, - -	1	—	1	Post Maturity.
Totals, - -	131	39	170	

46 per cent. of the patients affected with pulmonary tuberculosis were between the ages of 10 and 25.

DURATION OF ILLNESS.

		Months.		Years.	
Duration, -	1-3	3-6	6-12	1-2	2-4
Cases, -	4	13	8	17	32
					Over 4
					96

One deplors the large number of cases (56 per cent.) with a history of over four years' illness. No disease is more curable in its early stages than tuberculosis. The longer the delay in commencing treatment the more difficult and consequently the more expensive the treatment.

INITIAL MANIFESTATIONS OF ILLNESS.

Cough, - - - -	76	Following Gassing, - - - -	3
Influenza, - - - -	13	Laryngitis, - - - -	2
Pneumonia, - - - -	19	Lassitude, - - - -	6
Pleurisy - - - -	26	Loss of Weight, - - - -	8
Hæmoptysis, - - - -	9	Dyspnœa, - - - -	1
Adenitis, - - - -	4	Debility, - - - -	3

RESULTS OF TREATMENT.

The classification adopted is that of Turban-Gerhardt.

Stage of Disease.	Number of Patients.	T.B. Present.	Arrested.	Improved.	No Change.	Worse.	Died.
I, - - - -	91	4	32	38	19	2	—
II, - - - -	38	17	3	17	14	3	1
III, - - - -	41	24	1	13	21	5	1
Totals, - - -	170	45	36	68	54	10	2

COMPLICATIONS. — The undernoted table shows complications present in the different stages of the disease:—

	Stage I.	Stage II.	Stage III.	Total.
Cardiac Arrhythmia, - - - -	—	—	1	1
Conjunctivitis, - - - -	1	—	—	1
Diabetes, - - - -	—	—	1	1
Dyspepsia, - - - -	—	—	1	1
Hæmorrhoids, - - - -	2	—	—	2
Inguinal Hernia, - - - -	1	—	—	1
Ischio-rectal Abscess, - - - -	1	—	1	2
Laryngitis, - - - -	1	1	1	3
Otorrhœa, - - - -	3	2	1	6
Pleurisy, - - - -	1	—	1	2
Psoriasis, - - - -	1	—	—	1
Scoliosis of Spine, - - - -	—	1	—	1
Totals, - - - -	11	4	7	22

DURATION OF RESIDENCE IN DAYS.

Stage of Disease.	Average.	Maximum.	Minimum.
I, - - - -	234	1,122	4
II, - - - -	264	928	11
III, - - - -	261	1,660	3

FAMILY HISTORY.

	Number of Cases Discharged.	Stage I.	Positive History. Stage II.	Stage III.	Percentage.
Men, - - -	108	8	6	10	22
Women, - - -	14	2	3	1	43
Boys, - - -	23	9	—	—	36
Girls, - - -	25	6	—	—	24
	179	25	9	11	26

Results of investigations into the present condition of adult male cases of pulmonary tuberculosis treated and discharged during 1923.

	Number of Patients treated.	Now Working regularly.	Working irregularly.	Totally incapacitated.	Lost trace	Died.
Stage I, -	57	18	25	5	7	2
„ II, -	28	9	6	5	5	3
„ III, -	23	—	1	10	6	6
Totals,	108	27	32	20	18	11

The above table was compiled from the results obtained by a Questionnaire sent out in January, 1925. It should be noted that the large number of patients classified as “working irregularly” was due to the present unsatisfactory condition of the labour market rather than to health reasons. About 50 per cent. of the patients were fit for work after leaving the Colony. This percentage would undoubtedly have been much higher had the home conditions of the patients been satisfactory. It is exceedingly difficult to secure a permanent arrest of the disease when the patient has to return to bad hygienic conditions.

NON-PULMONARY TUBERCULOSIS.

131 patients received treatment for the non-pulmonary form of tuberculosis.

AGE AND SEX DISTRIBUTION.

Quinquennial Periods.	Males.	Females.	Both Sexes.	Age Groups.
Under 5, - -	2	2	4	Pre-School Age.
„ 10, - -	26	31	57	School Age.
„ 15, - -	25	27	52	
„ 20, - -	7	1	8	Adolescence.
„ 25, - -	2	1	3	
„ 30, - -	2	—	2	Early Maturity.
„ 35, - -	—	—	—	
„ 40, - -	3	—	3	
„ 45, - -	—	—	—	
„ 50, - -	—	—	—	Late Maturity.
„ 55, - -	—	—	—	
„ 70, - -	2	—	2	Post Maturity.
Totals, -	69	62	131	

The majority of the cases, 83 per cent., were between the ages of 5 and 15.

The following table shows results of treatment according to the nature of the disease:—

Site.	Arr.	Imp.	No Change.	Worse	Total.
Gland—					
Cervical Region, -	54	26	12	—	92
Tracheo-bronchial, -	2	1	—	1	4
Joints—					
Knee, - . .	—	—	1	—	1
Elbow, - . .	—	—	1	—	1
Hip, - . .	—	—	1	—	1
Ankle, - . .	—	—	1	—	1
Bone, - . . .	1	3	1	—	5
Skin, - . . .	2	3	1	—	6
Spine, - . . .	—	1	—	—	1
Abdomen, - . .	8	4	6	—	18
Eyes, - . . .	1	—	—	—	1
Totals, - . .	68	38	24	1	131

FAMILY HISTORY.

	Number of Cases Discharged.	Positive.	Percentage.
Men, - . . .	17	3	18
Women, - . .	3	1	33
Boys, - . . .	57	20	35
Girls, - . . .	54	24	44
	131	48	37

Included in the patients discharged during the year under consideration were 50 ex-servicemen, a reduction of 11 on the previous year. Of that number, 19 were in Stage I, 9 in Stage II, and 13 in Stage III. Of the remaining 9, 2 were suffering from tuberculous glands, while in seven cases no definite tuberculous lesion was detected.

Of the 125 adult males discharged during the period under review 99 registered for training. Seventeen were physically unfit for systematic training, but were engaged in occupational therapy, and nine were unable to work without prejudice to their condition.

NECESSITOUS CASES.

During the year 57 necessitous cases were supplied with clothing and boots as follows:—

	Cases.	Value.
Middle Ward District, - . . .	41	£124 15 0
Other Districts, -	16	48 13 0

The necessitous circumstances of all cases are verified by the respective Medical Officers of Health. As regards the Middle Ward cases it is to be regretted that the cost of clothing and boots is charged against the Colony. It would be more equitable if this expenditure was met by payment from a general tuberculosis fund.

WASSERMANN TEST.

A specimen of blood for the Wassermann test was taken from all adult patients on admission, with the undernoted results:—

Positive—

Fixes three doses complement, 3; four and a half doses, 1; six doses—2; and twelve doses, 2. Total, 8.

This is equal to 6 per cent. of the adult admissions. The figure for the previous year was 10 per cent.

DENTAL TREATMENT.

During the year 122 adults and 117 children received treatment as follows:—Extractions, 445; fillings, 55; scalings, 48. One feels confident in asserting that dental treatment is an extremely valuable aid in the treatment of tuberculosis. A large number of the cases were admitted with very marked evidence of dental caries, which must have caused a considerable amount of general toxæmia. The great predominance of extractions is to be regretted, as it indicates an absence of earlier conservative treatment.

UROCHROMOGEN REACTION.

In view of the supposed importance of the Weicz Urochromogen reaction from the point of view of prognosis, the urine from 198 patients was tested during the year with the following results:—8 cases, or 4 per cent., gave a positive reaction. 6 of these cases have since died. Of the latter, 5 were suffering from pulmonary tuberculosis, Stage III, and one had tuberculosis of the genito-urinary system. All the fatal cases died within nine months after the date of the positive reaction. The two cases that are still alive are making no progress, and the outlook is gloomy. Although the test has only been carried out to a limited extent one feels that it has a certain value.

X-RAYS.

The X-ray apparatus has been working steadily during the year and continues to be a very valuable aid in diagnosis. All cases were screened on admission, and in the majority of cases a radiographic

record by means of a film was made. The clinical and the X-ray examinations are done by the same physician, thus ensuring a proper appreciation of the various signs.

LIGHT TREATMENT.

The ultra-violet ray treatment, by means of the open carbon arc lamp, continued to give excellent results in non-pulmonary cases of tuberculosis, particularly adenitis and lupus. This treatment has been carried out at the Colony for two years, and one is now in a position to draw definite conclusions. It is no longer in the experimental stage, and one has no hesitation in placing it in the forefront of all forms of treatment for non-pulmonary tuberculosis. The results are marvellous, as will be seen from the reports on the undernoted cases.

The patients are treated with daily exposures of $2\frac{1}{2}$ hours' duration, a morning session for females, and an afternoon session for males. Altogether 27 males and 14 females were treated during the year, the average duration of treatment being about six months. The number of patients treated was limited by the size of the installation.

Towards the end of the year, a few special cored carbons were used, and it is hoped that even better results will be obtained, such as shortening the duration of treatment. With the acetone methylene blue gauge it was found that at a distance of 60 centimetres, these new carbons gave a bleaching of 5 on a scale of 10, more than double the result with the ordinary carbons.

J.L., Boy, æt. 7.

This child was subjected to the light bath, with a view to healing of a raw surface, resulting from rupture of a glandular abscess in the neck.

5/2/24 Commenced treatment.

Improvement was progressive from the first exposure. The margins of the raw surface gradually lost their torn appearance and healing, as indicated by approximation of edges and appearance of pink granulations over exposed surface continued.

15/7/24 Sinus completely healed with healthy scar.

M.S., Girl, æt. 14.

This girl had a glandular mass as large as a hen's egg in the neck, with one discharging sinus, the result of incision six weeks before admission.

18/1/24 Commenced treatment.

27/9/24 Glandular mass reduced by one half and sinus quite healed.

A. P., Girl, æt. 12.

A case of glandular tuberculosis. She was admitted three weeks after a glandular operation left side of neck, where a discharging sinus one inch long was present, with glandular thickening the size of a large marble subjacent. Inferior to the sinus was a healed cicatrix with very slight glandular enlargement in association.

29/7/23 Treatment commenced.

By 17/12/23 the sinus had closed, with slight reduction in the size of associated gland. The gland in association with inferior cicatrix showed fluctuation early in October and broke down, eventually healing being complete by 7/12/23, with disappearance of glandular thickening. On 5/1/24 the superior cicatrix broke down, free daily discharge occurring for about three weeks followed by mere crusting over a progressively healing sinus and almost complete reduction of the associated gland. On 4/3/24 the cicatrix presented a firm supple appearance, whilst the superior sinus showed only occasionally a bead of pus.

19/12/24 All sinuses healed with healthy scar.

This case is illustrative of the lighting up of activity of tuberculous glands, the stimulation of preliminary breakdown, and the subsequent healing under the rays of the open arc.

G. S., Boy, æt. 10.

A case of Lupus Exudans involving whole of right thigh, leg, and foot.

11/6/24 Treatment commenced.

31/12/24 Marked improvement in condition. Healthy skin over whole of leg and foot, with the exception of a small area on calf.

M. E. (Adult Female).

Admitted with discharging glandular sinus in sub-mental region, also involvement of left elbow joint with two discharging sinuses. A history of many years' duration. Had tried every known remedy.

10/6/24 Treatment commenced.

7/11/24 Complete healing of all parts with healthy scars.

M. M. (Adult Female).

This patient had old standing tuberculous disease of both elbows, with a discharging sinus immediately over each olecranon process.

27/9/23 Treatment commenced.

Under exposure, there was a preliminary increase in daily discharge during the first four weeks, followed by a gradual reduction and an attempt at cicatrization.

On 14/3/24 the sinus over the right olecranon had almost healed, a mere bead of discharge being occasionally noted. The sinus over the left olecranon had still a slight daily discharge.

24/4/24 Both sinuses healed with a healthy cicatrix.

RECREATION.—During the winter months, in addition to frequent concerts and whist drives, there was a weekly cinematograph entertainment, our good friends, Mr. Mitchell and Mr. Ormiston, again supplying the films free of cost. One would like here to express our gratitude to all the kind friends who have so generously provided entertainments.

A Literary Society was formed this year, and several interesting and instructive lectures were given. This is an interesting feature and worthy of every encouragement.

The Golf Course and Putting Green continue to be very much appreciated by the patients.

The Canteen was well patronised during the year and the Recreation Fund has benefited considerably from the profits, it being possible to pay for a proportion of the new billiard table.

LAUNDRY.—A new six-roller calender was installed and now all the laundry machinery is up-to-date and giving satisfaction.

METEOROLOGICAL REPORT.

I. RAINFALL.

Month.	Depth in Inches.	Month.	Depth in Inches.
January, - - - -	4·46	July, - - - -	3·32
February, - - - -	·58	August, - - - -	3·47
March, - - - -	·92	September, - - - -	5·83
April, - - - -	2·9	October, - - - -	2·88
May, - - - -	4·29	November, - - - -	2·90
June, - - - -	1·90	December, - - - -	6·60
Total Rainfall for Year, - — 40·05			

This shows a reduction of 4·68 inches on the previous year.

During the year there were 179 completely dry days.

II. WINDS.

North, - - - -	12	South, - - - -	73
North-East, - - - -	32	South-West, - - - -	77
East, - - - -	47	West, - - - -	53
South-East, - - - -	31	North-West, - - - -	41
<hr/>		<hr/>	
122		244	
<hr/>		<hr/>	

III. TEMPERATURE.

The highest, lowest, and mean shade temperature for each month follows :—

	Highest Reading.	Lowest Reading.	Mean.
January, - - - -	46	18	32
February, - - - -	52	20	36
March, - - - -	60	14	37
April, - - - -	58	20	39
May, - - - -	67	26	46·5
June, - - - -	66	29	47·5
July, - - - -	75	41	58
August, - - - -	70	38	54
September, - - - -	72	33	52·5
October, - - - -	60	28	44
November, - - - -	51	25	38
December, - - - -	52	30	41

The mean temperature for the year, therefore, works out at 43·8.

STAFF.

In October Dr. Norman F. Edgecombe was appointed Assistant Physician in place of Dr. Anderson, who had received an appointment under the Glasgow Education Authority. At the end of the year, the Institution staff, in addition to the Physician-Superintendent, Assistant Physician, and Matron, included the following :—

Sisters, - - - -	5	Typist, - - - -	1
Staff Nurses, - - - -	3	Clerks, - - - -	2
Nurses, - - - -	15	Electric Power Station, -	6
Supervisor, - - - -	1	Handyman, - - - -	1
Maids, - - - -	26	Porter, - - - -	1
School Teachers, - - - -	2	Attendant, - - - -	1
Total, - - - - 64			

COLONY DEPARTMENTS.

The training conditions in all departments were similar to those of previous years, the patients being trained by experienced instructors. The working hours per day varied from two to six according to the patients' physical condition.

GARDENS.

During the year 55 patients enrolled for training. Additions to the greenhouses, consisting of a tomato house, a perpetual flowering carnation house, and cool propagating house were erected, thus increasing the facilities for training patients. The potting shed continued to be used during inclement weather. The patients were

taught the principles of market gardening. Produce was supplied to the institution and the surplus was sent to market or sold privately. The staff consists of a head gardener, inside and outside foremen, six under-gardeners, two casual workers, and a carter.

FOREST NURSERY.

This department gives the patient a good training in the preparing of the ground, the sowing of seeds, and the rearing of the young trees. Most of the young trees were sent to the Afforestation Area at Camps, where several patients on the completion of their training were working. Owing to the increasing demands of the various housing schemes for hedges, a large portion of the Nursery was set aside for the growing of privet. The scheme for the growing of roses by budding commenced last year was well advanced and promised a good financial return.

41 patients enrolled for training during the year.

The staff consisted of a head forester, who is also in charge of Camps, a foreman forester, 5 under-foresters, a carter, and a caretaker.

POULTRY FARM.

During the year 63 patients enrolled for training. The patients received a good training in the hatching and rearing of the various light and heavy breeds of poultry. Poultry farming is very suitable work for patients, as it is essentially an open-air occupation and the duties are not arduous. The average number of patients working under the poultrymaid was 20, and these were divided into squads working two hours each day, thus ensuring that the poultry had regular supervision.

Owing to the increasing demands for day-old chicks, another incubator with a capacity for 150 eggs was purchased towards the end of the year. In the Incubator House there are now facilities for hatching 500 eggs at one time.

Owing to the exposed situation of the poultry runs sheets of corrugated iron have been erected as wind screens.

Altogether during the year 934 chickens and 9 ducklings were hatched, an increase of 40 on the previous year. At the end of the year the stock consisted of 60 cockerels, 267 pullets, 5 cocks, 339 hens, 10 ducks, and 2 drakes—total, 683 fowls.

PIGGERY.

The work in this department was done entirely by patients under the supervision of the Farm Manager. The old byre at the Cross Farm was reconstructed and used for the fattening of stock. There is now accommodation for about 100 pigs. Seven patients were employed daily in this department, and during the year 19 enrolled for training. They received an excellent training in the rearing and fattening of stock, also attending the Auction Marts and thus received a good knowledge of the selling of stock. The piggery continued to show a good financial return. The institution supplied all the brock, which was carefully sterilised before using.

There were in stock at the end of the year 85 pigs (an increase of 48 on the previous year) as follows:—2 large black boars, 7 large black brood sows, 5 middle white brood sows, 1 large white brood sow, 30 crossed young pigs under six weeks, and 40 crossed feeding pigs under six months.

FARM.

The farm continued to supply milk to the Colony, and, in addition, to the County Hospital, Blantyre. The stock is a pedigree Ayrshire herd, and we were again licensed to produce certified milk. The standard continued to be very satisfactory, the average marks for the routine veterinary inspections of the stock, byres, &c., being as high as 94 per cent.

There were no patients employed on the farm for reasons stated in last year's report, farm work not being suitable for the class of patient admitted to the Colony.

Owing to the exposed situation of the farm an open gangway was erected between the byres and the dairy, thus facilitating the immediate removal of the milk from the byre and protecting the milkers during inclement weather.

One has pleasure in recording the close co-operation with the West of Scotland College of Agriculture. With the assistance of the College Staff, experiments in feeding of the dairy stock were initiated and a demonstration plot for the growing of different varieties of oats was planned. The dairy stock continued to improve. The average percentage of butter fat was 4, and three cows yielded over 1,000 gallons for the year, the average for the whole herd being 800 gallons.

At the East Kilbride Cattle Show, we were successful in obtaining three first prizes, one second, and one fourth.

The staff consisted of the farm manager, dairymaid, assistant dairymaid, byreman, milkers, 2 ploughmen, and 2 odd men.

The stock at the end of the year was as follows:—1 stock bull rising 3 years, 4 young bulls rising 1 year, 41 cows, 29 heifers, and 4 calves, 6 work horses, 2 brood mares; and the young stock comprised 2 mares, 1 gelding, and 3 fillies.

GUINEA-PIG DEPARTMENT.

Owing to the increasing demands of the County Laboratory, this Department was extended. Most of the work was done by two patients, under the supervision of one of the staff. The guinea-pigs continued to be reared satisfactorily under open-air conditions.

Sent to County Laboratory.	-	-	-	-	-	147
Stock in hand at end of year.	-	-	-	-	-	128

INSTITUTION WORKSHOP.

This Department, organised for the carrying out of general Colony repairs, was carried on successfully during the year, and has considerably reduced the necessity for calling in outside tradesmen. Patients who had been carpenters or painters before admission to the Colony were employed in this Department. 8 patients came under this category.

GARAGE.

This year the garage was worked in conjunction with the Motor Repair Department. A trainee who had completed his training in this Department was put in full charge of the garage. He was responsible for the driving of the motor lorry, and did all running repairs. The other trainees were put under his care for outside traffic driving, after they had reached a certain stage of proficiency.

INDUSTRIAL WORKSHOPS.

These workshops have now been in existence for over a year, and one is now able to form a fairly definite opinion as to their suitability for the vocational training of the tuberculous. Training in the following occupations was available:—Carpentry, Basketmaking, Boot Repairing, Motor Repairing, and Toymaking. As most of the trainees were miners or artisans, a trade that requires some mechanical knowledge is very agreeable to them. The workshops have been an undoubted success, and go a long way towards solving the problem of vocational training. As stated in last year's Report, the minimum period for training is twelve months, it being considered impossible

to turn out an efficiently-trained man in a shorter period. The trainees work for six hours a day, divided into two spells of three hours—9-12 and 2-5—and there is a competent instructor in charge of each department.

There is accommodation for 36 trainees, as follows: — Motor Repairing, 12; Carpentry, 12; Boot Repairing, 6; Basketmaking, 3; Toymaking, 3. All the trainees were selected cases; that is to say, they showed no evidence of active disease and were in fairly good physical condition. As there were 114 beds in the Colony for adult males, this was not such a difficult problem. All the civilian trainees are paid 5s. a week, after a probationary period of one month. This did not apply to ex-Service men who were in receipt of a pension.

After the workshops had been running for some time, it was felt that the training would have to be developed on the theoretical as well as the practical side, and, if the training was to have any standing with employers, it would be necessary for the men to undergo an examination by some reliable authority having no connection with the Colony. Arrangements were made, as detailed in the reports on the various departments.

One would again stress the importance of an After-care Committee, which would take an interest in the trainee after he had completed his training. In this connection the suggested scheme of local workshops in populous districts of the Middle Ward of the County seems to promise some success. A trainee, on the completion of his training at the Colony, would be drafted to the workshop nearest his home, earning a wage and working under medical supervision, with good hygienic conditions.

MOTOR REPAIR DEPARTMENT.—This was one of the most popular departments. The men received a good mechanical training. In addition to the Wolseley car obtained at the opening of the workshops, the Ford Motor Company were good enough to supply a Ford chassis, which was of the latest type, for demonstration purposes. It was felt that two demonstration cars were necessary, as the controls of the Ford were entirely different to any other type, and there was a greater likelihood of a trainee being employed on a Ford before any other type of car.

During the year a certain amount of repair work was done to other cars and motor cycles. In addition, some of the farm machinery was overhauled, as well as engineering repairs for the Colony. The workshop is well equipped, with a screw-cutting lathe and vertical drill.

Regular lectures and demonstrations were given by the Instructor, including the dismantling and re-assembling of demonstration cars, also driving lessons. An arrangement was made with the Royal Scottish Automobile Club for the trainees sitting the examination for the Club Driving Certificate. All the trainees (7) who had entered for this examination were successful.

CARPENTRY DEPARTMENT.—This Department turned out some excellent work during the year, articles to the value of over £350 being sold. These consisted of tables, book-cases, ward lockers, cupboards, dressing tables, &c. A planing machine was installed and this has proved an exceedingly useful machine.

Owing to the increased requirements of this Department the adjacent shed for seasoning timber was converted into an extension of the workshop, and another seasoning shed was erected by the trainees. The work turned out by this Department compares very favourably with that produced by outside factories, and one has pleasure in reporting a steady increase in orders.

Regular lectures and demonstrations were given by the Instructor, and the trainees were shown how to use the various tools, the methods of preparing the timber, in addition to drawing and French polishing. Arrangements have been made for the trainees sitting an examination in Cabinetmaking of the City and Guilds of London Institute.

BOOT REPAIRING.—The trainees in this Department were kept steadily employed. The repairs averaged about 40 per week. In addition to the Colony repairs there has been a gratifying increase in the number of orders from private individuals. During the year repairs amounting to over £170 were executed.

Regular lectures and demonstrations were given by the Instructor, So far we have not been able to get into touch with any Authority holding an examination in Boot Repairing.

TOYMAKING DEPARTMENT.—There was considerable difficulty in disposing at a reasonable price of the toys made by this Department. The German article flooded the market and it was practically impossible to compete with mass production. There did not seem much prospect of the trainees earning a living at this occupation. Owing to the increasing demands of the other departments for accommodation it was eventually decided to close down towards the end of the year. The Department will now be amalgamated with the Carpentry Section.

BASKETMAKING DEPARTMENT.—This Department has been working steadily. It shared the room with the Toymaking Department, and for this reason was rather cramped for space. However, with the closing down of the Toymaking Department, the accommodation for basket work was increased and double the number of men can now be trained.

Cane and willow were used for the making of various types of baskets and trays. Some of the willow was grown on the estate. Most of the baskets were of the lighter type, although several clothes baskets were made. There was a steady demand by the outside public. During the year, baskets, &c., to the value of about £100 were purchased.

Regular lectures and demonstrations were given, and the trainees have entered for the examination in Basket Work of the City and Guilds of London Institute.

Veterinary Inspection of Dairy Herds.

The veterinary inspection of dairy herds was carried out by the County Veterinary Officer and an assistant.

Cows with abnormal conditions of the udder other than tubercle were also recorded, and the results are as shown in the following table:—

INSPECTION OF DAIRY HERDS, 1924-25, CLASSIFIED ACCORDING TO PARISH.

PARISH.	Herds.	Cows.	Suspected Tubercle.						Cows with Abnormal Conditions of Udder.					
			Samples of Milk.	Result.				Tubercle.	Atrophy.	Mammitis.	Induration N.T.	Eruption on Teats.	Total.	
				Smear.		Biological.								
				+	-	+	-							
Avondale, - -	147	3,757	11	1	10	3	4	3	92	20	35	7	157	
East Kilbride, -	124	3,151	12	2	9	4	5	5	171	25	65	31	297	
Glasford, - -	61	1,251	2	1	2	1	1	1	51	9	12	...	73	
Stonehouse, -	46	1,026	3	1	2	1	2	1	18	11	9	...	39	
<i>First Division, -</i>	<i>378</i>	<i>9,185</i>	<i>28</i>	<i>5</i>	<i>23</i>	<i>9</i>	<i>12</i>	<i>10</i>	<i>332</i>	<i>65</i>	<i>121</i>	<i>38</i>	<i>566</i>	
Blantyre, - -	28	418	5	...	5	1	2	1	20	2	13	...	36	
Bothwell, - -	80	1,383	10	1	9	2	4	2	47	11	20	12	92	
Cambuslang, -	32	584	4	1	3	3	1	3	29	5	15	4	56	
Cambusnethan, -	62	1,281	3	1	2	2	1	2	43	12	15	3	75	
Dalserf, - -	29	625	1	...	1	...	...	...	7	2	6	...	15
Dalziel, - -	10	279	1	...	1	...	1	...	13	1	5	8	27	
Hamilton, - -	64	1,455	3	...	3	...	1	...	60	9	22	11	102	
<i>Second Division, -</i>	<i>305</i>	<i>6,025</i>	<i>27</i>	<i>3</i>	<i>24</i>	<i>8</i>	<i>10</i>	<i>8</i>	<i>219</i>	<i>42</i>	<i>96</i>	<i>38</i>	<i>403</i>	
New Monkland, -	94	1,522	9	3	6	5	3	5	27	3	13	4	52	
Old Monkland, -	38	797	2	...	2	1	..	1	28	2	10	...	41	
Shotts, - -	98	1,595	3	2	1	2	1	2	30	10	8	...	50	
<i>Third Division, -</i>	<i>230</i>	<i>3,914</i>	<i>14</i>	<i>5</i>	<i>9</i>	<i>8</i>	<i>4</i>	<i>8</i>	<i>85</i>	<i>15</i>	<i>31</i>	<i>4</i>	<i>143</i>	
<i>Middle Ward, -</i>	<i>913</i>	<i>19,124</i>	<i>69</i>	<i>13</i>	<i>56</i>	<i>25</i>	<i>26</i>	<i>26</i>	<i>636</i>	<i>122</i>	<i>248</i>	<i>80</i>	<i>1,112</i>	

The total figures for abnormal conditions of udder include 43 cases of suspected tubercle, which gave negative results, and are, therefore, classified as induration.

These abnormal conditions and the number of cows affected were as follows :—Atrophy, 636; mammitis, 122; induration, N.T., 248; and eruption on teats, 80—total, 1,086. Adding to these figures the 26 affected with tubercle, the number of cows presenting abnormal conditions of the udder was 1,112, or 5·8 per cent.

The records show that 913 dairy herds, containing 19,124 cows, were examined. As on former occasions, samples of milk were drawn from all udders, which, upon examination, showed conditions suspicious of tubercle. In this way 69 samples of milk were taken and sent to the bacteriological laboratory, where, after examination, 26 were found to contain tubercle bacilli.

In all positive cases certificates were granted by the Veterinary Surgeon, in terms of Article 3 of the Dairies, Cowsheds, and Milkshops Order, 1899.

Maternity and Child Welfare Scheme.

Staffing Arrangements.—A note of the staff engaged in Maternity and Child Welfare Work is contained at the beginning of the Report on the Midwives (Scotland) Act. Eight District Nursing Associations continued to give part-time assistance in domiciliary visitation.

Births Registered.—There were registered the births of 6,251 infants—males, 3,190; and females, 3,061, which is equivalent to a birth-rate of 26·3 per 1,000 of the population. This is the lowest birth-rate which has ever been recorded in the Middle Ward District, and shows a decrease of 1·3 compared with the rate for 1923. The rates for the past five years are shown in Table A, which also shows the rates for decennial periods from 1891 to 1920. There were 329 illegitimate births—males, 173; and females, 156, which is equivalent to 5·2 per cent. of the total births.

Births Notified.—The number of notifications received was 6,343. Of these 6,112 were notifications of live-born children, the remainder—231—being notifications of still-births. The percentage of births notified (excluding still-births) to births registered was 97·7. The sources of notification were as follows:—

Doctors.	Midwives.	Handywomen.	Parents.	Institutions.	Other Sources.	Total.
1,323	3,576	65	744	383	252	6,343

To the number of births notified there falls to be added the births of 236 infants which occurred in institutions in the Middle Ward, but whose parents resided in areas outwith the Middle Ward District; 47 of these were notified from Bellshill Hospital, while 189 were notified from the Coatbridge and Airdrie Maternity Home.

Table M1 shows the births registered, births notified, visits made by the Nurse Health Visitors, the attendant at confinement as ascertained at the first visit, deaths registered, and the infantile death-rate, the information being tabulated according to registration districts.

Reference to the table shows that the total number of domiciliary visits made by the staff during the year was 65,882, a decrease of 178 compared with the previous year. The special visits referred to numbered 2,402, and were made in connection with the following conditions:—Ante-natal cases, 855; infant death inquiries, 198; ophthalmia neonatorum, 433; conjunctivitis, 7; squint, 439; puerperal fever, 34; discharging ears, 16; whooping-cough, 24; adopted babies (first and revisits), 198; maternal deaths, 5; blind persons, 5; measles, 145; chickenpox, 39; pneumonia, 4.

TABLE MI.

REGISTRATION DISTRICTS.	BIRTHS.		NUMBER OF VISITS.					ATTENDANT AT CONFINEMENT.			INFANT DEATHS.	
	Registered.	Legiti- mately.	Notified.	First.	Subsequent.	Special.	Total.	Doctor alone or with Handy-woman.	Midwife.	Handy woman.	Regis- tered.	Rate per 1,000 Births.
			Alive.	born.	Infants.	Mothers.						
Avondale, - - -	115	4	121	—	102	731	8	51	28	16	12	100·8
East Killbride, - - -	90	5	92	4	72	600	158	43	8	7	10	105·2
Glasford, - - -	31	2	31	1	35	324	12	8	13	11	4	121·2
Stonehouse, - - -	92	4	89	6	90	792	41	20	31	33	4	41·6
<i>First Division,</i>	328	15	333	11	299	2,447	219	122	80	67	30	87·4
Blantyre, - - -	579	41	602	33	624	3,188	501	19	109	418	60	96·7
Bothwell, - - -	545	24	558	20	546	6,430	652	48	128	330	57	100·1
Bellsill, - - -	680	32	691	26	723	6,146	507	76	251	316	84	117·9
Holytown, - - -	568	29	578	20	647	4,498	341	88	191	309	56	93·8
Cambuslang, - - -	633	30	644	24	645	6,824	2,195	165	77	338	54	81·4
Cambusnethan, - - -	318	23	342	5	362	4,777	98	194	117	36	37	108·5
Calderhead, - - -	120	2	118	2	112	1,060	23	93	10	3	12	98·3
Dalsert, - - -	120	5	124	6	149	1,036	33	29	52	60	12	96·0
Larkhall, - - -	393	19	406	22	398	2,427	89	102	118	150	36	87·3
Dalziel, - - -	31	—	33	2	42	389	19	9	6	19	2	64·5
Hamilton, - - -	202	13	215	7	226	2,121	59	35	43	127	31	144·1
<i>Second Division,</i>	4,189	218	4,311	167	4,474	38,896	4,517	858	1,102	2,106	441	100·0
New Monkland, - - -	349	29	361	16	376	3,094	113	46	77	215	43	113·7
Old Monkland (East), - - -	94	7	103	6	112	809	56	18	24	64	12	118·8
Do. (Coatbridge) - - -	70	4	71	2	89	558	16	14	5	64	6	81·0
Do. (West), - - -	328	20	342	10	270	2,388	65	62	47	140	35	100·5
Shotts (East), - - -	116	7	120	3	116	493	6	62	17	24	15	121·9
Do. (Middle), - - -	54	2	55	3	61	718	142	46	4	3	6	107·1
Do. (Calderhead), - - -	237	19	243	10	226	1,405	58	207	9	5	20	78·1
Do. (West), - - -	121	5	135	3	156	950	146	94	27	23	10	79·3
Do. (North), - - -	36	3	38	—	23	167	15	1	3	19	2	51·2
<i>Third Division,</i>	1,405	96	1,468	53	1,429	10,582	617	557	213	557	149	99·2
<i>Total,</i>	5,922	329	6,112	231	6,202	51,925	5,353	1,537	1,395	2,730	620	99·1
	6,251		6,343		2,402		65,882	102		74	364	

Particulars connected with 5,979 live infants have been recorded. Of this number it has been found that 1,498 (25 per cent.) were attended by medical practitioners alone, or assisted by handywomen; 1,310 (21·9 per cent.) by doctors assisted by certified midwives; 2,688 (44·9 per cent.) by certified midwives; 101 (1·7 per cent.) by women not on the midwives roll; 309 (5·1 per cent.) occurred in institutions; and in the case of 73 (1·2 per cent.) the birth took place before the arrival of an attendant.

Of the 231 still-births notified, particulars of 223 have been recorded, and the attendants at birth in these were as follows:—85 (38·1 per cent.), by doctors and midwives; 39 (17·4 per cent.), by doctors alone or assisted by handywomen; 42 (18·8 per cent.), by midwives alone; 1 (0·4 per cent.), by a handywoman alone; 55 (24·6 per cent.), in institutions; 1 (0·4 per cent.), born before arrival of an attendant.

As pointed out in the previous year's Report, the figures given are those obtained from the Nurse Health Visitors' records, and differ to some extent from the figures in Table I of the Report under the Midwives (Scotland) Act, the information for which is obtained from the notification forms.

Comparison with the previous years shows that there is remarkably little change in the figures giving the classification of the attendants at birth. The percentages for the past five years were as follows:—

		1920	1921	1922	1923	1924	
Cases attended by	Midwives,	42·9	43·4	49·5	47·9	44·0	per cent.
Do.	Doctors and						
	Midwives,	54·6	53·5	48·9	50·4	22·5	„
Do.	Doctors and						
	Handywomen,	—	—	—	—	24·8	„
Do.	Handywomen,	2·5	3·1	1·4	1·5	1·6	„
Do.	Institutions,	—	—	—	—	5·8	„
Do.	B.B.A.,	—	—	—	—	1·1	„

Although 102 births were attended by handywomen, the proportion of these to the total—viz., 1·6—is small. The circumstances regarding every such birth were inquired into, and, except in a very few cases, it was found that the handywomen had attended under conditions of undoubted emergency. In the few exceptions referred to, the handywomen were reprimanded, and warned that any repetition would be followed by prosecution.

Feeding at Age of Six Months.—5,578 records relating to infants born between July, 1923, and June, 1924, were investigated, to determine the feeding at the age of six months.

No special measures had been taken to ensure that this information would be available, and as a result the figures are incomplete. Arrangements have now been made to have the feeding at six months accurately recorded in every case, and the results of these inquiries will be embodied in future reports. For the period referred to the figures were as follows:—Wholly breast fed, 1,928; partially breast fed, 100; artificially fed, 598; died or removed, 489; and information incomplete, 2,463.

Infantile Mortality.—Deaths of infants under the age of one year numbered 620, which is equivalent to an infantile mortality of 99.1 per 1,000 births, compared with 77.3 for the previous year. In the previous year's report there was included a table showing the infantile mortality rates for the past ten years in registration districts, and similar information for the present year is contained in Table MI.

In comparing death-rates in individual registration districts with those which obtained in previous years, it will be seen that an increased rate is recorded in each of the three divisions of the District, and that the percentage increase is practically the same in each instance, the causes of death having apparently operated equally in rural, industrial, and mixed areas.

All ages have been affected, but, while the number of deaths in one month is again up by 15 per cent., deaths of infants over a month old have increased by 41 per cent.

With two exceptions — viz., gastro-intestinal and tuberculous diseases — the various group causes of death show increases, most marked in the case of respiratory and infectious diseases. Influenza, pneumonia, whooping-cough, and measles assumed moderate epidemic proportions about the month of March, and to these diseases, directly or indirectly, may be attributed the increase in the infantile mortality rate.

Table MII shows the deaths arranged according to group-causes and age-periods:—

TABLE MII.

CAUSE OF DEATH.	AGE PERIODS.										Rate per 1000 Births.
	WEEKS.				Total.	MONTHS.				Total.	
	- 1	1-2	2-3	3-4		- 4	1-3	3-6	6-9			9-12	- 12
1. Prematurity, - -	101	7	10	7	125	12	2	—	—	139	22·2
Congenital Malfor- mation, - -	10	3	1	2	16	8	2	—	—	26	4·1
Congenital Heart, -	1	1	1	1	4	1	2	—	—	7	1·1
Atelectasis, - -	8	1	—	—	9	2	—	—	—	11	1·7
Injury at Birth, -	6	1	—	—	7	—	—	—	—	7	1·1
2. Atrophy, Debility, and Marasmus, -	31	13	9	2	55	19	9	3	2	88	14·0
3. Diarrhœa, - -	—	—	—	2	2	15	13	7	9	46	7·3
Other Digestive Diseases, - -	—	1	1	—	2	—	4	1	—	7	1·1
4. Pneumonia, - -	—	2	—	—	2	16	19	24	28	89	14·2
Bronchitis, - -	1	—	2	2	5	11	7	7	4	34	5·4
Other Respiratory Diseases, - -	—	—	—	—	—	—	—	—	—	—	—
5. Tuberculosis, - -	—	—	—	—	—	—	—	—	—	—	—
Pulmonary, - -	—	—	—	—	—	1	—	—	—	1	0·1
Meningeal, - -	—	—	—	—	—	—	4	4	6	14	2·2
Abdominal, - -	—	—	—	—	—	—	—	—	5	5	0·7
Others, - -	—	—	—	—	—	—	1	—	—	1	0·1
6. Convulsions, - -	3	2	4	4	13	1	5	1	2	22	3·5
Hydrocephalus, -	1	—	—	—	1	1	—	—	—	2	0·3
Meningitis, - -	—	—	—	—	—	2	3	4	1	10	1·5
Other Nervous Diseases, - -	—	—	—	—	—	—	—	—	—	—	—
7. Measles, - -	—	—	—	—	—	—	2	6	18	26	4·1
Whooping-cough, -	—	—	—	1	1	5	5	12	10	33	5·2
Diphtheria, - -	—	—	—	—	—	—	—	1	—	1	0·1
Scarlet Fever, -	—	—	—	—	—	1	1	—	—	2	0·3
Erysipelas, - -	—	—	—	—	—	2	—	—	—	2	0·3
8. Syphilis, - -	—	—	—	—	—	—	1	—	—	1	0·1
9. Violence, - -	—	—	—	—	—	—	—	—	1	1	0·1
Suffocation (Over- lying), - -	—	1	—	—	1	2	—	—	—	3	0·4
10. All other causes, -	7	1	1	3	12	2	10	14	4	42	6·7
	169	33	29	24	255	101	90	84	90	620	
Rate per 1000 births,	27·0	5·2	4·6	3·8	40·7	16·1	14·3	13·4	14·3	99·1	99·1

Maternal Mortality (including 15 deaths from Puerperal Septicæmia).—The causes of maternal deaths may be divided into certain groups, and the following table shows the group causes, together with the number of deaths referable thereto for each year since 1910. The registered births, the birth-rates, and the death-rates per 1,000 births are also given:—

TABLE M III.—MATERNAL DEATHS FOR EACH YEAR SINCE 1910, ARRANGED ACCORDING TO GROUP-CAUSES; NUMBER OF BIRTHS, BIRTH RATES, AND MATERNAL DEATH RATES EXPRESSED PER 1,000 BIRTHS.															
Registered Cause.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
Puerperal Sepsis, - -	21	9	13	10	13	7	10	10	7	15	23	25	20	17	15
Albuminuria of Pregnancy and Eclampsia, - -	5	4	1	4	3	4	6	3	6	7	5	5	10	10	8*
Hæmorrhage, - - -	7	7	5	11	5	8	6	3	2	4	6	4	11	3	3
Cardiac Failure and Shock, - -	2	3	2	4	4	2	3	—	3	2	—	6	6	6	4
Abortion, - - -	—	3	2	2	3	1	—	—	1	2	1	—	2	1	—
Toxæmia of Pregnancy, -	3	—	1	4	3	1	2	1	—	—	2	3	1	5	1
Other Diseases and Accidents of Pregnancy, -	3	4	7	4	5	10	8	4	4	7	7	2	4	8	3
<i>Total, - - -</i>	41	30	31	39	36	33	35	21	23	37	44	45	54	50	34
* Albuminuria, 2; Eclampsia, 6.															
Registered Births, - -	7,309	6,981	7,111	7,001	7,388	6,684	6,572	6,072	6,420	6,410	7,562	7,023	6,364	6,218	6,251
Birth Rates, - - -	36.1	34.3	34.9	33.8	35.3	31.9	31.4	28.6	30.2	29.8	35.0	32.1	28.3	27.6	26.3
Death rate per 1,000 births (Puerperal Sepsis), -	2.87	1.28	1.82	1.42	1.75	1.04	1.52	1.64	1.09	2.34	3.04	3.56	3.14	2.73	2.39
Death rate per 1,000 births (excluding Puerperal Sepsis), -	2.73	3.00	2.53	4.14	3.11	3.89	3.80	1.81	2.49	3.43	2.77	2.84	5.34	5.31	3.03
Death rate per 1,000 births <i>Total, - - -</i>	5.60	4.29	4.35	5.57	4.86	4.93	5.32	3.45	3.58	5.77	5.81	6.40	8.48	8.04	5.43
												4.93		6.83	
												4.61			

Puerperal Septicæmia.—The number of cases of puerperal septicæmia reported during the year was 54, representing an incidence rate of 8·6 per 1,000 births; this is a decrease of 1·3 per 1,000 births compared with the previous year's figure.

The following table shows the incidence and death rates since 1918 :—

Year.	Total Cases.	Rate per 1000 Births.	No. of Deaths.	Fatality Rate.	Death Rate per 1000 Births.
1918	14	2·1	5	35·7	0·7
1919	37	5·7	15	40·5	2·3
1920	60	7·9	25	41·6	3·3
1921	68	9·6	25	36·7	3·5
1922	69	10·8	20	28·9	3·1
1923	62	9·9	17	27·4	2·7
1924	54	8·6	15	27·7	2·4

46 or 85·1 per cent. of the cases were removed for hospital treatment; 39 to the County Hospital, Motherwell; 6 to Lightburn Joint Hospital; and 1 to Belvidere Hospital, Glasgow.

In 6 cases a doctor alone or with the assistance of a handywoman, conducted the confinement and delivery was effected by means of forceps in 2 cases. In 18 cases a doctor and certified midwife were in attendance and in 12 of these cases forceps were used. In 17 cases the attendant was a certified midwife and in 3 cases a handywoman; 5 of the births took place in an institution, while in 5 cases (4 of which were abortions), there was no attendant present.

The incidence of the disease according to the number of pregnancy at which it occurred was as follows :—

No. of Pregnancy,	1	2	3	4	5	6	7	8	9	10	11	12	Not Stated.	Total.
No. of Cases,	-	20	7	7	3	2	3	2	3	3	1	—	2	54

The age distribution of the cases and deaths was :—

	Years	Under 20	20-25	25-30	30-35	35-40	Over 40	Total.	
Cases,	-	-	1	14	11	14	9	5	54
Deaths,	-	-	—	2	3	4	5	1	15

Only in 1 case was the mother unmarried.

Still Births.—The total number of notifications of still births received during the year was 231, and those were sent in by :—Doctors, 52; midwives, 100; handywoman, 1; health visitors, 11; parents, 6; institutions, 61.

Inquiries by the Nurse Health Visitors were made into 223 cases, and the following particulars obtained:—

Maturity.—The births occurred at full term in 137 cases, in 19 at the eighth month, and in 46 at the seventh month, and 10 at the sixth month; in 11 cases the duration of pregnancy was indefinite.

Attendant at Birth.—The attendant at birth was as follows:—Doctor and midwife, 85; doctor alone, or with handywoman, 39; midwife alone, 42; handywoman alone, 1; and institutional cases numbered 55; B.B.A., 1.

Nature of Confinement.—The confinement was ascertained to have been normal in 132 cases and abnormal in 91, instrumental delivery taking place in 59 of the latter.

The pregnancy at which still-birth occurred is shown as follows:—

Pregnancy, ...	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	and over	Total.
Stillbirths, ...	58	28	18	18	13	18	13	12	8	17		20	223

Previous Still-birth.—In 180 cases no previous still-birth had occurred, in the remaining 43 cases, previous still-births had taken place, viz., 1 in 18 cases; 2 in 10, 3 in 2; 4 in 1; 5 in 1; 6 in 1; and not stated 10.

Employment of Mother.—Only in 7 cases were the mothers engaged in other than domestic duties.

Age Distribution.—

-20	20-25	25-30	30-35	35-40	40-45	45	Unstated	Total
10	35	36	38	54	27	8	15	223

Health of Mothers during Pregnancy.—

Good, 121; Fair, 58; Poor, 34; Unstated, 10; Total, 223.

Probable Cause of Still-Birth.—In 59 cases it was difficult or impossible to determine any definite cause which might result in still-birth, and inquiry into the majority of those did not show any departure from normal health in the case of the mother or any abnormality at the time of confinement. In 164 cases, the probable causes of still-birth might be stated thus:—Delayed labour necessitating the use of forceps, 22; contracted pelvis, 6; malpresentation, 14; abnormalities of cord, 14; uterine displacement, 2; hydramnios, 4; albuminuria and eclampsia, 14; placenta prævia, 10; ante-partum hæmorrhage, 17; ill-health of mother, 18; tuberculosis, 1; ascitis, 1; strain, 11; worry, 6; abnormality of child, 15; prematurity, 6; hydrocephalus, 1; spina bifida, 1; injury at birth, 1.

Ophthalmia Neonatorum.—Cases, 97; rate per 1,000 births, 15·5 per cent.; admissions to hospital, 6.

The notifications represent an increase of 5·7 per 1,000 births compared with the previous year.

Of the total cases reported, 33 (34·0 per cent.) were notified by doctors, and 18 (18·5 per cent.) by certified midwives, and 5 (5·1 per cent.) by both doctors and midwives, while 41 (42·2 per cent.) were discovered by Nurse Health Visitors and some from the laboratory returns. In 22 cases a doctor alone, or with the assistance of a handywoman, was in attendance at the confinement—that is, the disease developed in connection with 1·4 per cent. of the total number of confinements conducted by doctors. Doctors and midwives were present at the birth in 10 cases, representing 0·7 per cent. of the total cases attended by doctors and midwives; a certified midwife alone was present at the birth in 59 cases, which is 2·1 per cent. of the total midwives' cases. Of those 59 attendants, 24 were *bona fide* midwives and 35 were certificated. 3 cases occurred in institutions, and 3 confinements took place before the arrival of an attendant.

In the following table the 97 cases are classified according to the severity of the disease and to the bacteriological findings:—

	Slight.	Moderate.	Severe.	Total.
Gonococcal, - - - -	1	2	2	5
Other Organisms, - - -	32	2	—	34
Pus but no Organisms, - -	4	5	—	9
No Pus No Bacteria, - -	21	1	1	23
No Swab, - - - -	20	—	—	20
Information Incomplete. - -	—	—	—	6
	78	10	3	97

It has been stated above that 41 out of 97 cases were reported by Health Visitors, and this high proportion of unnotified cases is accounted for to a considerable extent by the lack of a definite standard of what constitutes ophthalmia. The Nurse Health Visitors are instructed to swab every eye however slight the discharge may be and are not asked to discriminate, *e.g.*, between a dacrocystitis and a mild ophthalmia, as an error of diagnosis might be fraught with too much danger. It will be seen from the above table that in 43 instances the diagnosis of ophthalmia could not be sustained in the first place, in that there was either no pus present macroscopically (20 cases) or microscopically (23 cases). Clinically all but two

of these were not cases of ophthalmia neonatorum, but in one instance a moderately severe ophthalmia developed after the swab was taken and in another a severe infection manifested itself in the course of a few days. Bacteria other than gonococci accounted for 34 cases, of which 32 were clinically mild, and in a large proportion of these the infecting organism was reported to be the bacillus xerosis, which is of doubtful pathogenicity.

In all, 78 out of 91 cases recorded are classified as slight. While it will be admitted that most gonococcal infections are acute and severe, abortive or catarrhal cases followed by unexpected damage to the cornea are not unknown. There is little doubt that many practitioners and midwives reserve the diagnosis of ophthalmia for those cases which show much swelling of the eye-lids, profuse discharge, and threatened ulceration of the cornea. They are influenced naturally by a desire to alarm the mothers as little as possible and their general experience certainly is that those mild diseases clear up readily. While most are being thus properly assessed, it is convenient that the Public Health Department should investigate all cases for the purposes of discovering the occasional gonococcal infection that would otherwise be missed. The need for such precaution is illustrated by the experience of one year when 7 out of 14 positive swabs were obtained by Health Visitors from cases which were not notified. In 1924 of the 41 cases officially reported for the first time by a Health Visitor all but 3 were classified as mild and of the latter 2 were found to be gonococcal in nature. In one of these a midwife alone was in attendance and in the other a doctor and midwife.

While the absence of a uniform standard of diagnosis accounts for many of the unnotified cases it has also been found that where a doctor and midwife are in attendance notification of ophthalmia is sometimes omitted because the responsibility for such notification is assumed by each attendant to lie with the other. Again, both doctors and midwives sometimes seek the assistance of Health Visitors on account of discharging eyes without transmitting the formal notification, and these cases are recorded as not notified.

There is summarised in the following statement the results of examination of eye swabs since 1920. The number of specimens examined in 1920 and 1921 exceed the cases notified by 20 and 14 respectively. Since August, 1924, cases discovered through the laboratory lists have been passed through the register and the notification ascribed to the sender of the specimen.

	No. of Cases.	Gonococci.	Other Organisms.	No Organisms.	No. Discharge.
1920	109	14	65	30	—
1921	90	6	50	34	—
1922	70	3	28	11	28
1923	61	4	24	16	17
*1924	97	5	34	32	20
	427	32.	201	123	65

* Information incomplete in 6 cases.

There is repeated the evidence that many very mild infections are being dealt with and it is shown that only 7·6 per cent. of the cases were due to gonococci. In a collected series of 1829 cases treated at institutions, it has been stated that gonococci were demonstrated in 64 per cent. The trivial and transitory nature of the disease is also revealed by the not inconsiderable number of patients from whose eyes the Health Visitor was unable to obtain a specimen. It may be assumed, therefore, that no case of ophthalmia, which is serious or is likely to prove serious, is being missed by the Department and any charge of excessive zeal has been refuted by the discovery of gonococcal infections amongst those not notified as suffering from the disease.

Ante-Natal Cases.—The importance of ante-natal care and supervision is fully appreciated by the Local Authority, and it is hoped that some development of the work may be possible. During the year the activities of the department in this connection may be summarised as follows:—

The Nurse Health Visitors made 855 domiciliary visits to expectant mothers.

At the Child Welfare Centres, 381 attendances by ante-natal patients were recorded.

Ante-natal cases were admitted to the various Institutions, as follows:—County Hospital, Bellshill, 508 (381 for confinement and 127 for treatment); Calderbank Convalescent Home, 57; Royal Maternity Hospital, Glasgow, 4; and Coatbridge and Airdrie Maternity Home, 1.

At the out-patient department, Bellshill Hospital, 35 expectant mothers presented themselves for examination.

At the County Laboratory, 270 specimens of urine from ante-natal patients were examined, and of these 252 were sent by midwives (75 positive), and 18 by members of the Public Health staff (4 positive). In addition, 372 specimens were examined at the Child Welfare Centres, and 86 of these were positive.

CHILD WELFARE CENTRES.

Two additional Centres were opened during the course of the year, viz., one at Newarthill, on 5th November, 1924, and one at New Stevenston, on 18th November, 1924. It was found necessary, on 26th January, 1924, to discontinue the Centre at Glenboig. Throughout the year a considerable amount of the time of the medical and nursing staffs continued to be taken up in dealing with applications from families in necessitous circumstances, and there is no doubt that this type of work has seriously and adversely affected the original functions of the Centres.

Table MIV shows the attendances and consultations of mothers, infants, and children at the Child Welfare Centres during 1924:—

TABLE MIV.

Child Welfare Centres.	Mothers.	Total Attendances. Children.		Mothers.	Consultations. Children.	
		Under 1 Year.	Over 1 year.		Under 1 Year.	Over 1 Year.
Baillieston, -	2,405	1,795	693	42	83	66
Bellshill, -	4,640	3,848	1,448	107	210	97
Blantyre, -	3,761	2,634	1,409	317	221	220
Cadzow, -	837	581	341	6	50	38
Cambuslang, -	2,903	2,320	1,029	265	312	186
Glenboig, -	37	25	21	1	1	1
Larkhall, -	2,515	1,453	801	232	274	131
Newarthill, -	485	195	227	9	13	21
Newmains, -	1,659	809	627	78	106	102
New Stevenston, -	484	210	244	6	11	8
Shotts, -	1,154	655	481	22	105	44
Uddingston, -	1,807	1,022	732	71	83	74
	22,687	15,547	8,053	1,156	1,469	988

The Centres are open once a week, between the hours of 3 and 5 p.m., with one exception, viz., Cadzow, where the session is held once weekly, between the hours of 10 and 12.

The attendances in the above table include cases which received assistance under the Maternity and Child Welfare Scheme, except in the case of Cambuslang and Blantyre, where special sessions are held for the purpose.

Table MV shows the number of attendances made by mothers and children for various classified conditions; it will be observed that the figures refer to attendances and not to cases:—

TABLE MV.

CENTRE.	MOTHERS.					INFANTS AND CHILDREN.											
	Ante-Natal	Post-Natal	Gynecolog	Others	TOTAL	Nutritional and Gastro- Intestinal	Respiratory	Tuberculosis	Skin	Ear, Nose, and Throat	Eyes	Teeth	Rickets	Hernia	Phimosis	Others	Total
Baillieston, - - -	9	9	18	6	42	66	12	1	29	14	6	1	7	6	1	6	149
Bellshill, - - -	30	37	19	21	107	146	19	8	41	10	33	1	13	9	6	21	307
Blantyre, - - -	128	85	30	74	317	218	70	6	47	26	9	1	27	7	5	25	441
Cadzow, - - -	2	2	-	2	6	46	5	2	8	5	2	1	1	4	-	14	88
Cambuslang, - - -	117	108	36	4	265	295	51	8	70	26	29	-	2	6	3	8	498
Glenboig, - - -	1	-	-	-	1	-	-	-	-	1	-	-	-	-	-	1	2
Larkhall, - - -	60	88	79	5	232	229	23	1	54	35	29	-	-	19	6	9	405
Newarthill, - - -	2	5	1	1	9	15	3	-	8	1	6	-	-	-	1	-	34
Newnains, - - -	5	21	31	21	78	97	9	5	30	17	16	1	5	8	1	19	208
New Stevenston, - - -	1	3	1	1	6	6	3	-	4	1	2	-	-	1	1	1	19
Shotts, - - -	6	11	5	-	22	70	7	6	28	8	13	-	-	10	1	6	149
Uddingston, - - -	20	31	7	13	71	73	13	3	22	17	6	1	6	4	2	10	157
	381	400	227	148	1,156	1,261	215	40	341	161	151	6	61	74	27	120	2,457

Necessitous Cases. — The numbers dealt with monthly and the annual figures and estimated expenditure for each Centre are shown in Table MVI below.

TABLE MVI.

Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total		
490	464	439	379	191	223	271	315	344	391	430	495	4,432		
No. of Cases.				Amount.				No. of Cases.				Amount.		
Baillieston, ...			318		£183	3	0	Newmains, ...			89	£46	2	5
Bellshill, ...			628		323	13	9	New Stevenston, ...			21	15	17	0
Blantyre, ...		1,568			892	1	0	Shotts, ...			64	30	19	5
Cadzow, ...			95		56	13	6	Uddingston, ...			307	185	5	6
Cambuslang, ...			376		247	4	8	Airdrie, ...			404	234	1	0
Glenboig, ...			26		10	4	8	Strathaven, ...			117	73	5	8
Larkhall, ...			273		191	8	4	Greengairs, ...			130	69	7	10
Newarthill, ...			16		11	11	0							
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3,300				£1,915 19 11				1,132				£654 18 10		
<hr/>				<hr/>				<hr/>				<hr/>		
CASES.								EXPENDITURE.						
Total, ... 4,432.								£2,570 18 9.						

Educational Work. — The following table shows the number of demonstrations and lectures which were given at the various Centres during the year, and it is in the curtailment of this work that the milk and meal lines have operated so adversely:—

TABLE MVII.

DEMONSTRATIONS.				LECTURES.	
Cookery.		Dress-making.			
Baillieston, -	11	10		Wall Charts.	Preparing Baby's Cot.
Bellshill, -	10	23		Rickets, Digestion.	Talk on Child Life.
				Common Ailments in Children.	Whooping - cough and Measles.
				General Care of Children.	Fresh Air.
				Infant Life.	Diarrhœa.
Blantyre, -	10	12		Measles.	Don'ts to Mothers.
				Tuberculosis,	Care of Mother and Baby.
				Hints on Health and Happiness.	Invalid Cookery.
Cambuslang, -	10	23		Pregnancy.	Infantile Mortality.
				Common Ailments in Children.	Poultice Making.
				Making Baby's Crib.	Baby Feeding.
				Care of the Skin.	Toy Making.
				Bathing Baby.	
Glenboig, -	—	1		—	—
Larkhall, -	11	9		—	—

Newarthill, -	2	1	Ante-natal Period.
Newmains, -	11	13	The Normal Child. Infant Feeding. Rickets. Measles. Washing of baby. Whooping-cough. General Care of Infants. Skin Disease. General Care of Infants.
New Stevenston, —	—	11	Measles.
Shotts, - -	10	22	Common Ailments in Children. Infantile Diarrhœa.
Uddingston,	10	11	Post-natal Period. Infant Feeding. Measles. Summer Diarrhœa.
	<hr/> 85	<hr/> 136	

Treatment of Squint.—The work in connection with the treatment of squint cases is summarised in the following statement:—

Cases Examined at	First Cases.	Spectacles Prescribed.	Re-examined.
Bellshill, ...	24	17	25
Blantyre, ...	3	3	1
Cambuslang, ...	5	5	1
Hamilton, ...	15	14	—
	<hr/> 47	<hr/> 39	<hr/> 27

Dental Treatment—Mothers and Children.—During the year 21 mothers and 2 children were recommended for dental treatment, and of these 13 mothers attended the dental surgeons appointed by the Local Authority.

Boarded-out Children.—During the year two children were boarded out by the Local Authority, one in Stonehouse Parish and the other in the North of Scotland. Two children reached the age of five years, and consequently the Local Authority's responsibility for their maintenance ceased; in one of the cases the mother assumed responsibility for the child's maintenance, while in the other the child was transferred to New Monkland Poorhouse. The total number of children boarded out by the Local Authority by the end of the year was 11.

County Maternity Hospital, Bellshill.

REPORT BY THE PHYSICIAN-SUPERINTENDENT,
HENRY JAMES THOMSON, M.D.

The number of patients remaining in hospital on 31st December, 1923, including 5 babies born in hospital, was 36, and the number of patients admitted, including 334 babies born alive in the Institution, numbered 1,176. There were left in the hospital at the end of the year 39 patients, including 13 babies born in hospital. Of the 389* confinements, 334 infants were born alive (6 were twin births) and 61 still-births.

TABLE M I.

		In Resi- dence on Admit- 1st Jan.	ted.	Dis- charged.	CONDITION ON DISCHARGE.			In Resi- dence on 31st Dec.
					Well.	I.S.Q.	Died.	
Mothers—								
Ante-Natal—								
For Confinement,	-	15	381	383	331	39	13	13
For Treatment,	-	2	127	124	121	—	3	5
Abortions,	-	3	135	135	134	—	1	3
Post-Natal,	-	1	60	60	58	2	—	1
Gynæcological,	-	7	114	120	120	—	—	1
Other Conditions,	-	1	1	1	1	—	—	1
Children,	-	2	24	24	23	—	1	2
		31	842	847	788	41	18	26

* This figure includes 6 patients confined during 1924, but remaining in residence until 1925.

TABLE M II.
ANTE-NATAL CASES.

During the year 508 ante-natal cases were admitted. The conditions found were as follows:—

In labour, - - - - -	173	General debility, - - - - -	9
Premature rupture of membrane, - - - - -	7	Acute abdominal pain, - - - - -	7
Not yet in labour, - - - - -	132	Phlebitis, - - - - -	5
Accidental hæmorrhage, - - - - -	27	Pyelitis, - - - - -	3
Central placenta prævia, - - - - -	4	Tapeworm, - - - - -	3
Lateral placenta prævia, - - - - -	3	Exophthalmic goitre, - - - - -	2
Marginal placenta prævia, - - - - -	1	Antepartum mastitis, - - - - -	2
Albuminuria, - - - - -	19	Prolapse of cord, - - - - -	2
Hyperemesis, - - - - -	15	Cardiac disease, - - - - -	2
Eclampsia, - - - - -	14	Mental deficiency, - - - - -	2
Toxæmia of pregnancy, - - - - -	2	Hydramnios, - - - - -	2
Albuminuria and cardiac disease, - - - - -	1	Peri-renal abscess, - - - - -	2
Antepartum septicæmia and albuminuria, - - - - -	1	Impacted breech, - - - - -	1
Accidental hæmorrhage and albuminuria, - - - - -	1	Hernia of uterus, - - - - -	1
Albuminuria and pus in urine, - - - - -	1	Oedema of lower extremities, - - - - -	1
Albumen and blood in urine, - - - - -	1	Abscess of vulva, - - - - -	1
Excessive salivation, - - - - -	1	Epilepsy, - - - - -	1
Albuminuria and œdema, - - - - -	6	Antepartum pyrexia of unknown origin, ... - - - - -	1
Laryngitis, with neuritis of upper and lower extremities, - - - - -	1	Severe rheumatoid arthritis, - - - - -	1
Bronchitis, - - - - -	3	Pregnancy, with prolapse of uterus, - - - - -	1
Pneumonia, - - - - -	2	Debility and albuminuria, - - - - -	1
Pulmonary tuberculosis, - - - - -	1	Syphilis, - - - - -	1
Empyema, - - - - -	1	Cystitis, - - - - -	1
Contracted pelvis, - - - - -	23	Hysteria, - - - - -	1
Delayed labour, uterine inertia, - - - - -	13	Injury to abdomen, - - - - -	1
		Enteritis, - - - - -	1

Results of Treatment.—Of the 507 cases discharged, 452 left the hospital well, 39 were in the same condition, or worse, and 16 died. Detailed information with regard to the fatal cases is given under the heading, “History of Maternal Deaths.” Details of the 39 cases discharged “I.S.Q.,” or “worse,” are as follows:—

TABLE M III.

Contracted pelvis, - - - - -	23	Exophthalmic goitre, - - - - -	1
Cardiac disease, - - - - -	2	Hernia of uterus, - - - - -	1
Mentally defective, - - - - -	2	Neuritis, - - - - -	1
Peri-renal abscess, - - - - -	2	Prolapse of uterus, - - - - -	1
Antepartum septicæmia, - - - - -	1	Pulmonary tuberculosis, - - - - -	1
Empyema, - - - - -	1	Rheumatoid arthritis, - - - - -	1
Epilepsy, - - - - -	1	Syphilis, - - - - -	1

ABORTIONS.

Number of cases, 135 (including 4 cases of ectopic gestation). The details of the abortion cases are as follows:—(1) threatened, 37; (2) inevitable—(a) complete, 10; (b) incomplete, 84.

Results of Treatment.—Of the 37 cases of threatened abortion, the routine treatment was successful in 25 cases, and these patients carried on to full term. The remaining 12 either became incomplete abortions, or were in that condition when admitted. Nine of the complete abortions were discharged well, and one died of pneumonia. Details of the fatal case will be found under the heading, “History of Maternal Deaths.” The remainder of the cases of abortion were curetted and discharged well.

With regard to the 4 cases of ectopic gestation referred to above, rupture had taken place in each case previous to admission. Laparotomy was performed and the fallopian tube excised. The patients made an uneventful recovery, and were discharged well.

TABLE M IV.

ABNORMAL OR COMPLICATED CONFINEMENTS.

No. of cases, 66. Conditions found were as follows:—

Contracted pelvis, - - -	23	Obstruction due to hydrocephalus, - - -	1
Delayed labour, - - -	12	Partial placenta prævia, - - -	1
Eclampsia, - - -	6	Persistent occipito posterior and eclampsia, - - -	1
Central placenta prævia, - - -	3	Primiparous breech, - - -	1
Bronchitis, - - -	2	Prolapsed cord, - - -	1
Face presentation, - - -	2	Prolapsed cord and transverse presentation, - - -	1
Accidental hæmorrhage, - - -	2	Transverse presentation, - - -	1
Marginal placenta prævia, - - -	2	Transverse presentation and lateral placenta prævia, - - -	1
Uterine inertia, - - -	2	Rheumatoid arthritis, - - -	1
Concealed hæmorrhage and fibroid tumour, - - -	1		
Lateral placenta prævia, - - -	1		
Minor contraction of pelvis, - - -	1		

Results of Treatment.—60 patients were discharged well and 6 died. Details of the fatal cases are contained in this report under the heading “History of Maternal Deaths.”

OTHER CASES OF CONFINEMENT.

(a) Number of normal deliveries,	327
(b) Number of cases delivered without medical attendance at delivery,	327

(c) Number of instrumental deliveries, exclusive of those appearing under abnormal or complicated confinements,	Nil
(d) Number of cases of morbidity (B.M.A. Standard),	25
(e) Number of cases under (d) in which delivery was instrumental (7 forceps, 1 caesarean section),...	8
(f) Number of deaths from "Other Cases of Confinement,"	1

The death was certified as due to "pulmonary embolism, heart failure, debility following confinement, anæmia." Further particulars are recorded under the heading "History of Maternal Deaths."

Receipts from patients, £431 17 8

INFANTS.

Number of infants born,	334	61
Number of cases of twins,	6	(11 children were born alive, and 1 was still-born.)
Number of deaths of infants under 8 days old,	19	
Number of cases of puerperal sepsis removed from Institution,	1	

HISTORY OF MATERNAL DEATHS.

A.9.—Patient admitted in labour and in a semi-conscious condition, suffering from eclampsia. Had two fits before admission, and eighteen fits in all at intervals of from 10 to 60 minutes. Delivered under chloroform by forceps, but never regained consciousness after delivery. In labour $8\frac{1}{2}$ hours. Primipara.

Cause of death: *Eclampsia*.

B.4.—Patient admitted in a semi-conscious condition, suffering from eclampsia. Had five fits before and seventeen fits after admission, the former at intervals of 15 minutes and the latter from 1 to 2 hours. In the ninth month of pregnancy. 5 para. Patient died undelivered.

Cause of death: *Eclampsia*.

C.17.—Patient admitted suffering from pneumonia. In the fifth month of pregnancy. After admission labour pains commenced, accompanied by uterine hæmorrhage. Uterine contents expelled normally $1\frac{1}{2}$ hours after admission, but patient collapsed immediately after parturition, and died in 10 minutes. 3 para.

Cause of death: *Pneumonia, miscarriage, and cardiac failure*

A.28.—Patient admitted suffering from goitre, the thyroid gland having increased much during pregnancy. Labour induced three weeks after admission, and patient delivered herself normally. Four days after delivery she complained of severe pain in the left thigh, which lessened after local treatment. Developed septic pneumonia and severe enteritis 7 days after delivery, and died 3 days later. Eighth month of pregnancy. Primipara.

Cause of death: *Septic pneumonia, goitre, cardiac failure.*

A.44.—Patient admitted in an exhausted condition—almost at full-term—suffering from heart disease. Gradually became worse, but was delivered two days previous to death, the cause of which was confirmed by *P.M.* examination. 13 para.

Cause of death: *Fatty degeneration of heart, liver, and kidneys.*

A.84.—Patient admitted—at full-term—suffering from albuminuria and general oedema. She had developed a temperature of 102.4° F. thirty-two hours before admission. She also presented the symptoms of pyelitis, and there was abundant pus in the urine. Patient was delivered two days after admission, but developed acute enteritis three days later, and succumbed. 2 para.

Cause of death: *Pyelitis, enteritis.*

B.60.—Patient admitted—at third month of pregnancy—suffering from hyperemesis gravidarum. Had suffered from sickness for four weeks before admission. The day after admission hysterotomy was performed in order to have the uterus emptied, but patient collapsed immediately after operation, and died in 3½ hours.

Cause of death: *Toxæmia of pregnancy, exhaustion.*

A.169.—Patient admitted—at full-term—suffering from pneumonia. Was very ill, with a temperature of 101.6° F., and pulse 160. Labour commenced a few hours after admission, and patient delivered herself normally within 2½ hours. After delivery she became very restless, with laboured breathing and scanty expectoration. Gradually became delirious, and died 30 hours after delivery. 9 para.

Cause of death: *Pneumonia.*

A.207.—Patient admitted—at full-term—suffering from “fainting turns.” Had a pendulous abdomen. Stated she was in labour. On examination nothing representing the presenting part of the foetus could be discovered, but a tumour was detected. Cæsarean section was performed (without removal of the tumour owing to patient’s

condition), and a full-term child delivered. Patient suffered not only from the fibroid tumour, which was in the lower uterine segment, but also from concealed accidental hæmorrhage. She recovered surprisingly well from the effects of the operation, but died on the 12th day from pulmonary embolism. 10 para.

Cause of death: *Obstructed labour, fibroid tumour, concealed hæmorrhage, cæsarean section, heart failure.*

A.219.—Patient admitted in labour—in the 7th month of pregnancy—suffering from uterine inertia. Delivered herself normally of a still-born premature child. After confinement patient progressed favourably for six days, but then died suddenly from pulmonary embolism. 8 para.

Cause of death: *Heart failure, debility following confinement, anæmia.*

B.89.—Patient admitted—in the 7th month of pregnancy—suffering from eclampsia, and in an unconscious condition. Had seven fits before and four after admission. Routine treatment carried out without effect, and patient died 5 hours after admission. Primipara.

Cause of death: *Puerperal eclampsia, cardiac failure.*

A.292.—Patient admitted at full-term, having been attended by a doctor and midwife for 24 hours previous to admission. Size of os permitted of the admission of two fingers. Was given morphia on two occasions with a view to enabling her to rest. Craniotomy was performed and the child delivered, but patient developed acute sepsis, and died within 24 hours of delivery. Primipara.

Cause of death: *Difficult and delayed labour, acute sepsis.*

A.330.—Patient admitted in labour, attempted forceps delivery outside having failed. Position, persistent occipito posterior. Delivery carried out in hospital, but patient died 30 hours afterwards. Primipara.

Cause of death: *Shock and collapse following delayed labour and difficult instrumental delivery.*

B.100.—Patient admitted—at almost full-term—suffering from eclampsia. Had had three fits before and seventeen after admission. Became suddenly very cyanosed 11 hours after admission, had severe epistaxis, and died in a few minutes. Primipara.

Cause of death: *Puerperal eclampsia.*

A.324.—Patient admitted in labour suffering from eclampsia. Had four fits before and thirteen after admission. Delivered with forceps. Patient did not respond to the recognised treatment for eclampsia, and died 8 hours after admission. Primipara.

Cause of death: *Puerperal eclampsia.*

B.111.—Request received that patient be removed to hospital as she was in labour. Had been suffering from bronchitis, albuminuria, and general oedema for some time previously. Patient died in the ambulance before reaching the hospital. 13 para.

Cause of death: *Puerperal eclampsia (confirmed by post-mortem examination).*

A.375.—Patient admitted in labour suffering from contracted pelvis, and with abundance of albumen in urine. The os was large enough to permit of the admission of two fingers, and the pains were very poor. Craniotomy was performed 18 hours after admission, but after delivery patient became very drowsy and gradually became unconscious. Primipara.

Cause of death: *Acute toxæmia, delayed labour, craniotomy delivery.*

Summary.—Of the 17 maternal deaths, puerperal eclampsia was responsible for 6. 4 of the 6 died undelivered, and the remaining 2 were delivered in the institution. 3 of the 4 who died undelivered were acutely ill before admission, and the 4th had suffered for a considerable time from bronchitis, albuminuria, and general oedema. The last-named died in the ambulance before reaching the institution. Neither of the 2 patients who died after delivery responded to the recognised treatment for eclampsia.

No special comment is necessary with regard to the remainder of the maternal deaths beyond what is stated in the detailed information in the preceding pages.

Albuminuria.—The cases admitted as albuminuria numbered 27, and the cases admitted for other conditions, found after admission to have albumen in urine, numbered 67.

Children.—The conditions or circumstances necessitating the admission of the 24 children to hospital were:—General debility, 2; admitted with mother, 22.

The following tabular statement shows the areas from which the patients were admitted, the admissions from the Middle Ward being classified according to parish:—

TABLE M V.

MIDDLE WARD, - - - 778

Avondale, - - -	14	Cambusnethan, - - -	10
East Kilbride, - - -	20	Dalserf, - - -	70
Glasford, - - -	3	Dalziel, - - -	1
Stonehouse, - - -	9	Hamilton, - - -	30
Blantyre, - - -	96	New Monkland, - - -	16
Bothwell, - - -	322	Old Monkland, - - -	45
Cambuslang, - - -	87	Shotts, - - -	55
LOWER WARD, - - -	25	HAMILTON BURGH, - - -	4
UPPER WARD, - - -	27	LANARK BURGH, - - -	8
Total, - - -	-	-	842

OUT-PATIENT TREATMENT.

During the year a number of cases suffering from abnormal conditions affecting pregnancy and from post-natal conditions received advice at the clinic. Such cases were usually sent to the hospital by medical practitioners.

The following table shows the cases dealt with from the various parishes, classified according to the nature of the condition diagnosed :—

TABLE—OUT PATIENTS.

	Endometritis	Dysmenorrhoea	Torn Cervix	Torn Perineum	Prolapsus Uteri	Ante-natal	Abortions	Fibroids of Uterus	Dyspareunia	Anæmia	Menopause	Sterility	Cæsarean Sect.	Retroversion	Hernia of Uterus	Hernia (Inguinal)	Others Specific Dis.	Hyper-Involution	Sub-Involution	Retroflexion	Cystitis	Menorrhagia	Cystocele	Pistula	Malignant Disease	Salpingitis	Fibroid of Uterus	Vaginitis	Total	
Avondale, -	-	1	-	-	-	2	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	6	
East Kilbride, -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	
Glasford, -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Stonehouse, -	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	5	
Blantyre, -	4	2	2	-	3	2	3	-	1	1	1	-	1	2	-	-	7	-	-	-	-	-	1	-	-	-	-	-	30	
Bothwell, -	29	5	14	1	5	11	6	-	-	2	3	2	-	1	1	-	24	-	-	-	-	1	14	1	1	2	1	-	124	
Cambuslang, -	2	2	2	-	2	5	-	-	-	1	-	-	-	2	-	-	6	-	-	-	-	-	-	1	-	-	-	-	23	
Cambusnethan, -	2	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	1	-	-	-	-	-	-	11	
Dalserf, -	6	-	4	-	3	5	1	-	-	2	1	-	-	-	-	-	6	-	1	-	-	2	3	-	-	-	-	-	34	
Dalziel, -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hamilton, -	1	-	2	-	-	2	-	-	-	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	1	-	-	10	
New Monkland, -	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Old Monkland, -	2	1	1	-	1	-	2	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	1	-	11	
Shotts, -	4	2	5	-	-	2	1	1	-	2	-	-	-	-	-	-	5	-	-	-	-	-	2	-	-	-	-	-	24	
Lower Ward, -	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	2	-	-	-	-	-	-	4	
Upper Ward, -	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	3	-	-	-	-	-	1	-	-	1	-	-	9	
Burgh of Hamilton, -	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	
Burgh of Coatbridge, -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Burgh of Lanark, -	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Total, -	50	12	35	1	15	35	15	2	1	9	5	3	2	5	-	-	62	-	3	1	1	1	21	7	3	2	5	1	1	297

The Clinic is held three times a week for women suffering from abnormal conditions of pregnancy, but more especially for those conditions which may affect pregnancy, or which may be the result of difficult labour, as, for example, tears of the cervix, fistulæ, cystocele, rectocele, ruptured perineum, and menorrhagia.

STAFF.—The staff consists of the following:—

Physician-Superintendent.	1 Nurse Typist.
Consulting Surgeon.	2 Probationers.
Anæsthetist.	8 Maids.
Matron.	1 Chauffeur.
3 Sisters.	3 Stoker-Gardeners.
3 Staff Nurses.	

In addition to the permanent staff, there are eight nurses who are taking their course of midwifery training.

During the year under review 20 pupils were admitted for training, bringing the total number of pupils trained since the time when the Institution was recognised as a Training School up to 50. 49 entered for the examination of the Central Midwives Board for Scotland, and 48 obtained the C.M.B. certificate. The amount collected in premiums during the last three years is £402 10s., 27 nurses paying the full premium, 4 paying a booking fee of £1, and 19 receiving free training on account of having received 3 year's training in one or other of the County Institutions. The following extract from Regulations for Pupils shows the amount of premium to be paid, whether the nurse is resident in the County or outside the County, or is in training in one of the County Institutions.

“In respect of the training afforded, all nurses who are on the General or Supplementary Register, and living outside the Local Authority's area, shall pay a premium of £20, and all other trainees living outwith the Local Authority's area shall pay a premium of £25. For those living in the Local Authority's area the premium will be £15, whether they are on said register or not. Nurses who receive their training in any of the County Institutions will obtain their training as a midwife free of charge, except as aftermentioned, but such nurses shall not be entitled to such free training unless they have completed three years' training as a nurse. When a nurse has left any of the County Institutions, she will not be entitled to free maternity

training unless she has applied and been accepted for training as a midwife before the expiry of her period of training as a nurse. Of the amounts mentioned, £1 must accompany the application for engagement, and the balance will be payable when training is commenced. Nurses who are trained in the Local Authority's Institutions must likewise make a deposit of £1 at the time of application for engagement. Such deposit shall not be repayable, except, in the opinion of the Physician-Superintendent, special circumstances warrant repayment. Where an applicant has received previous training, one reference must be from the Matron under whom she last worked.

“Applicants who are not certificated nurses must have a good general education. Applicants who do not hold a certificate in English satisfactory to the Physician-Superintendent must pass a test in English (including dictation), and also, if required, in arithmetic and general knowledge.”

Statistics.

TABLE M VI.

NATURE OF PRESENTATION.

Delivery.	Vertex.	Breech.	Footling.	Placenta Prævia.	Cæsarean Section.	Cranio- tomy.	Face.	Total.
Normal, -	315	10	2	—	—	—	2	329
Manual, -	2	8	1	5	—	—	2	18
Instrumental,	33	—	—	—	—	—	—	33
Induction, -	5	2	—	—	—	—	—	7
Operative, -	—	—	—	—	7	1	—	8
Total, -	355	20	3	5	7	1	4	395

Induction of Labour.—There were 7 cases where labour was induced, for the following causes:—

Albuminuria, - - -	2	Contracted pelvis, - - -	1
Toxæmia of pregnancy, - -	1	Bronchitis, - - -	1
Eclampsia, - - -	1	Goitre and septic pneumonia, -	1

TABLE M VII.

Cæsarean Section was performed in 7 cases, as follows:—

No.	Number of previous Dead Children.	Condition of Child—Lived or Died.	Remarks.
1	—	L.	Cæsarean section performed for the second time—mother and baby discharged well.
2	4	L.	Mother and baby discharged well.
3	—	L.	Cæsarean section performed two years ago—mother and baby discharged well.
4	1	L.	Mother and baby discharged well.
5	4	Still-born	*Mother died 12 days later—heart failure.
6	1	L.	Cæsarean section performed three years ago—mother and baby discharged well.
7	2	L.	Mother and baby discharged well.

* Mother admitted in labour, large fibroid tumour attached to lower uterine segment. At the operation a large concealed hæmorrhage was found.

TABLE M VIII.

UNAVOIDABLE HÆMORRHAGE (PLACENTA PRÆVIA).

	Para.	Duration of Pregnancy.	Duration of Hæmorrhage (before admission).	Child Alive or Still-born.	Mother Lived or Died	Remarks.
1	2nd	8th month	?	S.	L.	Marginal Placenta Prævia.
2	3rd	9th „	?	A.	L.	Lateral Placenta Prævia.
3	9th	8th „	4 hours	S.	L.	Central Placenta Prævia.
4	2nd	8th „	?	A.	L.	Marginal Placenta Prævia.
5	5th	9th „	6 hours	S.	L.	Central Placenta Prævia.
6	7th	8th „	?	A.	L.	Marginal Placenta Prævia.
7	4th	8th „	3½ hours	S.	L.	Partial Placenta Prævia.
8	3rd	9th „	5 hours	S.	L.	Central Placenta Prævia. Transferred to Motherwell Hospital with puerperal sepsis.
	2nd	6th „	8 hours	A.	L.	Lateral Placenta Prævia.

“S”—Still-born.

A ”—Born alive.

TABLE M IX.
ACCIDENTAL HÆMORRHAGE.

	Para.	Duration of Pregnancy.	Duration of Hæmorrhage.	Child Alive or Still-born.	Mother Living or Dead.	Remarks.
1	2nd	7th month	3 days	A.	L.	—
2	1st	9th „	6½ hours	A.	L.	—
3	5th	9th „	9 hours	A.	L.	—
4	3rd	9th „	?	S.	L.	—
5	11th	8th „	15 hours	S.	L.	—
6	9th	9th „	?	S.	L.	—
7	8th	9th „	?	S.	L.	—
8	1st	8th „	2 hours	S.	L.	—
9	2nd	7th „	16 hours	S.	L.	—
10	12th	9th „	?	A.	L.	—
11	?	7th „	?	S.	L.	—
12	1st	7th „	?	S.	L.	—
13	13th	9th „	2 hours	S.	L.	—
14	4th	9th „	?	A.	L.	—
15	2nd	9th „	?	A.	L.	—
16	6th	9th „	?	S.	L.	—
17	4th	9th „	?	A.	L.	—
18	?	7th „	12 hours	A.	L.	—

TABLE M X.

Post-Natal Cases.—The 60 post-natal cases discharged during the year were suffering from:—

General debility, - - - -	25	Appendicitis, - - - -	1
Post-partum hæmorrhage, - - -	4	Cardiac disease, - - - -	1
Adherent placenta, - - - -	3	Hæmaturia, - - - -	1
Albuminuria, - - - -	3	Lumbar abscess, - - - -	1
Adherent membranes, - - - -	2	Pernicious anæmia, - - - -	1
Eclampsia, - - - -	2	Renal abscess, - - - -	1
Mastitis, - - - -	2	Subinvolution, - - - -	1
Phlegmasia alba dolens, - - -	2	Other conditions, - - - -	10

Total, - - - - 60

TABLE M XI.

GYNÆCOLOGICAL CASES.

Nature of Condition.	Nature of Treatment.	No. of Cases.
Endometritis.	Medical treatment.	5
Do.	Curettage and iodine pack.	9
Do.	Curettage.	19
Do. and torn cervix.	Curettage and repair of cervix.	1
Do. and complete tear of perineum.	Curettage and perineorrhaphy.	1
Do. and retroversion.	Curettage and iodine pack.	1
Do. with menorrhagia.	Medical treatment.	1
Sterility.	Curettage.	14
Dysmenorrhœa.	Cervical dilatation and curettage.	6
Subinvolution and retroversion.	Curettage.	1
Subinvolution.	Curettage and iodine pack.	3
Do.	Curettage.	1
Dysmenorrhœa, with immature uterus.	Cervical dilatation.	1
Torn cervix.	Trachelorrhaphy.	9
Torn perineum.	Perineorrhaphy.	6
Incised perineum (for delivery).	Perineorrhaphy.	1
Torn perineum and cervix.	Trachelorrhaphy and perineorrhaphy.	3
Prolapsus uteri.	Amputation of cervix and colpoperineorrhaphy.	3
Do.	Perineorrhaphy.	1
Do.	Anterior and posterior colpoperineorrhaphy.	6
Do.	Examination.	1
Do.	Nil (over age).	1
Cystocele.	Anterior colpoperineorrhaphy.	1
Ascess of Bartholin's gland.	Excision.	2
Double cystic ovary.	Oophorectomy.	1
Cystic ovary.	Do.	1
Do.	Nil (examination).	1
Retroflexion.	Gilliam's operation.	1
Do.	Nil (over age).	1
Fibroid.	Abdominal hysterectomy.	3
Do. multiple.	Do.	1
Inversion of uterus.	Removal to general hospital for operation.	1
Pyometra and sterility.	Iodine pack.	1
Carcinoma of uterus.	Nil (inoperable).	1
Sarcoma of ovary.	Oophorectomy.	1
Polypus.	Excision.	1
Renal abscess.	Nil (sent to general hospital).	1
Vesico-vaginal fistula.	Examination.	1
Amenorrhœa.	Do.	1
Total,		<u>114</u>

TABLE B I.

INFANTS BORN IN HOSPITAL.

In Residence on 1st Jan.	INFANTS BORN.		DISCHARGED.		In Residence on 31st Dec.
	Alive.	Still-born.	Well.	Died.	
5	334	61	303	23	13

The following tabular statement shows the sex of the babies born in hospital alive or still-born, distinguishing between legitimate and illegitimate births:—

TABLE B II.

Sex.	Babies Born Alive.		Babies Still-born.	
	Legit.	Illegit.	Legit.	Illegit.
Males, - -	120	42	22	1
Females, - -	130	42	30	8
	334		61	

The following table shows the number of infants born in the institution during each of the years 1919-1924:—

TABLE B III.

Year			In Residence on 1st January.	Infants born.		Discharged.		In Residence on 31st December
				Alive.	Still-born.	Well.	Died.	
1919,	-	-	2	30	2	22	5	5
„ 1920,	-	-	5	110	6	105	6	4
„ 1921,	-	-	4	203	22	183	15	9
„ 1922,	-	-	9	213	50	201	11	10
„ 1923,	-	-	10	288	57	273	20	5
„ 1924,	-	-	5	334	61	303	23	13

Causes of deaths of infants born alive in hospital, but who died within 8 days of birth:—

TABLE B IV.

Asphyxia pallida, - - -	1	Intestinal hæmorrhage, -	2
Convulsions, - - -	1	Malnutrition, - - -	1
Hydrocephalus, - - -	1	Spina bifida, - - -	2
Icterus neonatorum, - - -	1	Prematurity, - - -	9
Injury at birth, - - -	1		
		Total, -	19

Still-births.—The causes of the 61 still-births were as follows:—

TABLE B V.

Toxæmia of pregnancy—		Prematurity, - - - -	6
Albuminuria, - - - -	4	Macerated, - - - -	6
Eclampsia, - - - -	5	Prolapsed cord, - - - -	4
Ante-partum hæmorrhage—		Anencephalus, - - - -	3
Accidental, - - - -	10	Knot on cord, - - - -	1
Placenta prævia, - - - -	5	Craniotomy, - - - -	1
Concealed, - - - -	1	Hydrocephalus, - - - -	1
Delayed labour, - - - -	7		
Do. (abnormal presentations), -	7		

County Convalescent Home, Calderbank House.

Physician-Superintendent—G. MACLEOD MILLAR, M.B., Ch.B.

Matron—Miss G. M'NEILL.

BUILDINGS AND GROUNDS.—During the year alterations to the gardener's house were carried out, giving another room and a bathroom. The erection of a verandah at the home has been approved, and the installation of electric light and laundry plant is under consideration.

ACCOMMODATION.—There has been no change in the accommodation.

STAFF.—The nursing staff consists of the following:—Matron, 1 sister, 1 staff nurse, 1 assistant nurse, and 5 probationers. The domestic staff consists of 1 cook and 7 maids. The outdoor staff comprises a head gardener, assistant gardener, and apprentice.

PATIENTS TREATED.—On 1st January, 1924, 8 mothers and 26 children were in residence at the home. During the year 196 mothers and 189 children were admitted, making a total of 385. One child was born in the home. Admissions were suspended for a period of approximately four weeks beginning in February, owing to measles occurring in the home, and for a similar period commencing in May owing to whooping-cough. 199 mothers and 183 children were discharged, and 13 children died. On 31st December, 1924, 5 mothers and 20 children were in residence.

PLACE OF RESIDENCE.—Of the 385 cases admitted, 346 resided in the Middle Ward District, 7 in the Upper Ward, 31 in the Lower Ward, and 1 in Hamilton Burgh. The following shows the place of residence of the Middle Ward cases arranged according to Parish:—Avondale, 1; East Kilbride, 5; Stonehouse, 1; Blantyre, 82; Bothwell, 134; Cambuslang, 63; Cambusnethan, 8; Dalserf, 17; Dalziel, 2; Hamilton, 4; New Monkland, 7; Old Monkland, 18; and Shotts, 4. The admissions were arranged from the following Child Welfare Centres.—Baillieston, 16; Bellshill, 71; Blantyre, 71; Cambuslang, 54; Glenboig, 2; Larkhall, 12; Newarthill, 3; New Stevenston, 3; Newmains, 8; Shotts, 4; and Uddingston, 28. In addition 63 cases were transferred from the County Hospital, Bellshill; 2 from the County Hospital, Blantyre; 17 from the County Hospital, Motherwell; and 3 from Lightburn Hospital. 3 cases were admitted direct from the Upper Ward; 24 from the Lower Ward; and 1 from Hamilton Burgh.

REASON FOR ADMISSION.—The reasons for admission were as follows :—*Mothers*.—Post-natal debility, 89; ante-natal debility, 55; post-operative debility, 8; anæmia, 38; nephritis, 1; ex-ophthalmic goitre, 1; cardiac disease (ante-natal), 2; mastitis, 1; and chronic bronchitis, 1.

The *Children* were admitted for the following reasons:—Breast-fed infants with mother, 85; debility, 48; rickets, 31; enteritis, 6; marasmus, 4; mother in hospital, 8; infantile paralysis, 2; and septic head, 5.

DURATION OF RESIDENCE.—The average duration of residence of the patients discharged was 18 days for mothers and 35 days for children.

RESULTS OF TREATMENT.—The majority of cases were well or much improved on discharge. 13 children died, the causes of death being as follows:—Enteritis, 1; pneumonia, 5; tuberculous meningitis, 2; marasmus, 3; disseminated tuberculosis, 1; and meningitis, 1.

County Hospital, Blantyre.

Physician-Superintendent—H. J. THOMSON, M.D.

Matron—Miss G. R. STEVENSON.

ACCOMMODATION.—The accommodation for patients is 11 cots and 7 beds.

STAFF.—The nursing staff consists of a matron, a day staff-nurse, a night staff-nurse, and three probationers. There are three maids. A gardener is employed part time.

CASES TREATED.—12 cases were under treatment on 31st December, 1923, and during the year 130 cases were admitted, 120 were discharged, and 7 died, leaving 15 cases under treatment on 31st December, 1924.

PLACE OF RESIDENCE.—Of the 130 cases admitted, 124 resided in the Middle Ward, 3 in the Upper Ward, and 3 in the Lower Ward District. The parishes of residence of patients admitted from the Middle Ward were :—

Avondale,	-	1	Cambusnethan,	4	New Monkland,	1		
Blantyre,	-	28	Dalserf,	-	19	Old Monkland,	6	
Bothwell,	-	22	East Kilbride,	2	Shotts,	-	-	1
Cambuslang,	-	34	Hamilton,	-	6			

AGE OF PATIENTS.—The ages of the cases under treatment were as follows :—

CHILDREN :—

Months.		Years.		Total.
-6	6-12	1-2	2-5	
41	12	10	4	67

OTHERS :—

Years.				Over	Total.
-20	-25	-30	-35	-40	40
8	16	12	17	8	2
					63

NATURE OF ADMISSIONS.—The conditions which necessitated admission were :—

CHILDREN :—

Adenitis,	2	Malnutrition, -	16
Debility,	6	Marasmus,	8
Eczema,	1	Mother in Hospital,	23
Enteritis,	1	Prematurity,	2
Gastritis,	5	Rickets,	3
<hr/>			
			67

OTHERS :—

Ante-natal for observation,	17	Nephritis,	3
Abscess,	1	Ovaritis,	1
Curettage,	2	Pelvic Cellulitis,	2
Debility,	18	Perinephritic abscess,	1
Eczema,	1	Paraplegia,	1
Mastitis,	12	Post-natal,	4
<hr/>			
			63

RESULT OF TREATMENT.—78 cases were discharged well, 9 improved, in 1 case the condition remained stationary, 5 were allowed home at own request, 20 were transferred to Bellshill Hospital, 4 to Motherwell Hospital, 2 to Royal Infirmary, 1 to Calderbank, and 7 children died.

The causes of death recorded were as follows :—

Bronchial Pneumonia,	1	Malnutrition,	1
Congenital Debility,	1	Marasmus,	2
Congenital Debility and Prematurity,	2	<hr/>	
			7

COUNTY OF LANARK.
DISTRICT OF THE MIDDLE WARD.

MIDWIVES (SCOTLAND) ACT, 1915.

Eighth Annual Report by the Medical Officer
of Health, 1924.

STAFF.

Administrative Officer.

J. HUME PATTERSON, F.R.F.P.S.(G.), D.P.H.

Executive Officers and Inspectors of Midwives.

J. M'CALLUM LANG, M.D., D.P.H.

HENRY J. THOMSON, M.D.

JOHN A. C. GUY, M.B., Ch.B., D.P.H.

G. MACLEOD MILLAR, M.B., Ch.B.

Nurse Health Visitors and Assistant Inspectors of Midwives.

(All hold the C.M.B. Certificate.)

HELENA STRATH.

JEAN F. ROSS.

MARGARET STEWART.

MARGARET ARNOT.

CATHERINE ROBERTSON.

JEAN BAIRD.

ANNIE HARDIE.

HELEN C. KEEGANS.

ISABEL W. TAYLOR.

MARGARET MACAULAY.

KATE SANDERSON.

KATHERINE CURRAN.

ELIZ. C. M'DONALD.

JEAN HANLEY.

ELIZ. L. DICK.

MARY MACDONALD.

FLORA MACKENZIE.

Practising Midwives.—During the year 229 certified midwives (181 resident within and 48 resident outwith the Middle Ward) notified their intention to practise—a decrease of 2 compared with the number for last year.

The qualifications of the practising midwives are as follows:—

	1920	1921	1922	1923	1924
Certificate of the Central Midwives Board (Scotland),	45	41	49	50	54
Certificate of the Central Midwives Board (England),	2	2	2	2	2
Trained and certified by the Royal Maternity Hospital (Glasgow),	7	8	9	7	6
Trained and certified by the Royal Maternity Hospital (Edinburgh),	1	1	1	1	1
In <i>bona fide</i> practice and certified under the Act,	183	179	174	171	167
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	238	231	235	231	230
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

The above table shows that there are now 63 trained midwives, an increase of 3, and that there are 167 uncertificated midwives, as compared with 171 in 1923.

Change of Address.—The changes of address of 45 midwives were reported to the Board; 10 left the District, 5 of the latter going abroad.

Deaths.—Two uncertificated midwives died during the year, their numbers on the Roll being 586 and 1,730.

Voluntary Resignations.—Four certified midwives resigned from practice.

Inspection of Midwives.—The routine inspections of midwives resident in the District numbered 726. In addition 137 special inspections were made on account of non-compliance with the Rules, while a few were made for tuitional purposes. There were found still remaining a small number of midwives whose homes were not regarded as satisfactory; while, in a few cases, the midwives themselves did not conform to a reasonable degree of personal cleanliness. In connection with the possession of midwifery outfits, 9 midwives were without bags and linings; 2 did not possess washable uniforms and aprons; 4 were without nail brushes; 6 without scissors; and 24 had not

supplied themselves with thermometers. In a considerable number of cases, the reports of the Inspectors showed that registers in 13 instances and temperature charts in 66 instances were either kept incorrectly or no attempt was made to keep them at all.

Disciplinary Case.—A handywoman who continued to practise habitually and for gain was prosecuted at the instigation of the Local Supervising Authority. In the notes submitted by the Medical Officer of Health it was shown that the woman had been called to her cases shortly after the beginning of labour and apparently in emergency. She had, however, failed to summon a qualified attendant—midwife or doctor—at the earliest opportunity; had attended the patients throughout the puerperium, and had accepted fees for her services. She was found guilty and fined £3, or 15 days' imprisonment.

Attendance at Confinement.—There were notified during the year the births of 6,112 living children, and in addition 231 notifications of still births were received. The number of live births notified constituted 97·7 per cent. of the total births registered, which amounted to 6,251. Including still births the total number of births notified was 6,343, and of these, according to the information given on the Notification Forms, 1,950 (30·7 per cent.) were attended by doctors; 1,078 (16·9 per cent.) by doctors and midwives; 3,196 (50·3 per cent.) by certified midwives; and 90 (1·4 per cent.) by handywomen. During the previous year handywomen were in attendance at 1·8 per cent. of the births. 29 infants were born before the arrival of an attendant.

The amount of work undertaken by individual midwives was found to vary very considerably. For example, in each of three instances the midwife attended over 100 confinements, the actual numbers attended being 160, 157, and 107. Two of the midwives referred to hold the C.M.B. Certificate, while the third one is untrained.

The following table gives, according to Parish, the number of midwives practising within the Middle Ward, the births notified, and the person in attendance at the confinement:—

TABLE I.—SHOWING THE NUMBER OF MIDWIVES, BIRTHS NOTIFIED AND THE ATTENDANCE AT CONFINEMENT AS INDICATED IN THE NOTIFICATION FORM.

ATTENDANT AT CONFINEMENT.									
PARISH.			Number of Midwives.	Births Notified.	Doctor.	Doctor and Midwife.	Midwife.	Handy-woman.	B.B.A
Avondale,	...	...	2	121	70	35	16	—	—
East Kilbride,	...	...	—	96	80	2	12	—	2
Glasford,	...	...	3	32	5	14	13	—	—
Stonehouse,	...	...	5	95	37	7	49	2	—
Blantyre,	...	...	17	635	29	92	505	4	5
Bothwell,	...	...	58	1,893	292	507	1,067	17	10
Cambuslang,	...	...	15	668	227	55	384	1	1
Cambusnethan,	...	...	17	467	335	49	74	7	2
Dalserf,	...	...	29	558	166	111	264	15	2
Dalziel,	...	...	—	35	13	1	18	2	1
Hamilton,	...	...	3	222	45	30	141	3	3
New Monkland,	...	...	13	377	53	77	235	10	1
Old Monkland,	...	...	15	534	147	51	315	21	—
Shotts,	...	...	5	610	451	47	102	8	2
Midwives resident outwith District			48	—	—	—	—	—	—
Total,			230	6,343	1,950	1,078	3,196	90	29

In addition to the 6,343 births notified in the above table, 47 occurred in Bellshill Hospital and 189 in the Airdrie Maternity Home, of cases belonging to areas outwith the Middle Ward District.

Infantile Deaths.—The total number of deaths of infants under the age of one year was 620, and of this number 188 occurred within 10 days of birth. The attendant at birth in the latter cases was as follows:—certified midwife, 51; doctor and midwife, 58; medical practitioner alone, or with handywoman, 55; handywoman, 3; institutions, 20; B.B.A., 1.

The causes of death in the 188 cases referred to were as follows:—premature births, 106; congenital malformation, 15; injury at birth, 7; cerebral hæmorrhage, 2; atelectasis, 9; debility, 35; pneumonia, 1; bronchitis, 1; influenza, 1; convulsions, 4; other ailments, 5; other septic diseases ill defined, 2.

***Still Births.**—231 still births were notified during the year and special enquiries were made into 223 of these. A medical practitioner alone was in attendance in 39 cases, a midwife alone in 42 cases, a doctor and a midwife together in 85 cases, and a handywoman alone in 1 case. 1 case was born before the arrival of an attendant. Fifty-five of the still births occurred in institutions.

***Puerperal Septicæmia** (including all notifications of puerperal fever).—Fifty-four cases were brought to the notice of the Department, a decrease of 8 on last year's figures. The confinement was conducted by a medical practitioner in 6 instances, by a doctor and a midwife in 18, by a midwife alone in 17, and by a handywoman in 3. One confinement took place before the arrival of an attendant. Four cases occurred following abortion and 5 cases were reported from institutions. Fifteen deaths occurred, and in these cases the attendant at confinement was as follows:—midwife, 4; doctor and midwife, 5; doctor alone, 2; handywoman, 2; institutions, 2,

***Ophthalmia Neonatorum.**—The total number of cases brought under notice was 97, and of these 33 (34·0 per cent.) were notified by medical practitioners; 18 (18·5 per cent.) by certified midwives; 5 (5·1 per cent.) by both doctors and midwives; and 41 (42·2 per cent.) were discovered in the District by the Nurse Health Visitors. The persons in attendance at birth in the above cases were as follows:—doctors, 22; doctors and midwives, 10; midwives, 59. Three confinements took place before the arrival of an attendant, and 3 occurred in institutions.

***Examination of Urine.**—30 midwives submitted 252 specimens for examination at the County Laboratory and in addition 372 specimens were examined at the Child Welfare Centres.

Medical Assistance.—Medical aid was sought by midwives in 465 instances, an increase of 152 compared with last year. The conditions for which assistance was obtained are detailed in the following table:—

* These conditions are more fully dealt with in the Child Welfare Section of the Annual Report.

TABLE II.—SHOWING THE RECORDS OF SENDING FOR MEDICAL ASSISTANCE, CLASSIFIED ACCORDING TO PARISH AND THE CONDITIONS REQUIRING MEDICAL AID. THE TOTALS ARE ALSO SHOWN FOR EACH YEAR SINCE 1917.

REASONS FOR MEDICAL ASSISTANCE.	Parish.											Total during							
	Stonehouse.	Blantyre.	Bothwell.	Cambuslang.	Cambusnethan.	Dalserf.	Dalziel.	Hamilton.	New Monkland.	Old Monkland.	Shotts.	1924	1923	1922	1921	1920	1919	1918	1917
MOTHER—																			
Delayed labour (unqualified),	—	64	37	18	1	2	1	1	9	8	1	142	85	63	64	51	53	49	50
Contracted Pelvis,	—	—	6	—	—	—	—	—	—	—	—	6	8	3	—	2	1	2	2
Uterine Inertia,	—	2	7	1	—	1	—	—	1	1	—	13	14	9	11	7	3	9	6
Abnormal Presentation,	—	10	12	12	1	—	—	—	—	1	—	36	28	21	12	10	19	15	23
Placenta Prævia,	—	—	1	—	—	—	—	—	—	—	—	1	—	1	—	2	—	3	3
Ante-partum Hæmorrhage,	—	3	6	4	—	—	—	—	—	1	—	14	12	4	6	5	5	4	1
Post-partum Hæmorrhage,	—	—	2	3	1	—	—	—	1	—	—	7	6	4	6	8	4	7	8
Retained Placenta,	—	5	14	2	—	—	—	1	2	—	—	24	12	12	4	10	7	14	18
Hydramnios,	—	—	—	—	—	—	—	—	—	1	—	1	1	2	1	—	—	—	—
Eclampsia,	—	—	2	—	—	—	—	—	—	—	—	2	2	1	—	3	3	2	2
Torn Perineum,	—	20	8	17	—	—	—	2	—	3	1	51	47	41	35	17	23	16	9
Abortion (actual or threatened),	—	3	1	3	—	—	—	—	—	—	—	7	8	4	4	1	4	—	5
Pyrexia,	—	8	4	3	—	—	—	—	—	1	—	16	14	6	7	6	6	4	8
Puerperal Sepsis,	—	—	1	—	—	—	—	—	—	—	—	1	3	3	1	—	—	—	—
Rigor, with rise of temperature,	—	—	1	1	—	—	—	—	—	—	—	2	—	—	—	1	—	—	—
Phlebitis, ...	—	1	—	—	—	—	—	—	—	—	—	1	3	1	—	—	—	—	—
Influenza, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Cystitis, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
General Debility,	—	5	—	1	—	—	—	—	—	—	—	6	3	7	4	3	1	1	4
Albuminuria,	—	6	4	3	—	—	—	—	—	3	2	18	—	—	—	—	—	—	—
Prolapse Uterus,	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Other causes,	—	8	6	6	—	—	—	—	4	2	1	27	17	11	8	5	7	16	8
CHILD—																			
Still Birth, ...	—	6	1	6	—	2	—	—	—	—	—	15	20	8	3	1	6	2	2
Premature Child,	—	8	10	5	—	—	—	—	—	—	—	23	13	8	5	6	11	3	6
Ophthalmia Neonatorum,	—	8	8	10	—	—	—	—	—	—	—	26	11	9	11	1	7	7	5
Congenital Malformation,	—	3	—	—	—	—	—	—	—	—	—	3	3	3	—	—	—	—	—
Hæmorrhage of Cord, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Convulsions,	—	2	—	—	—	—	—	—	—	—	—	2	—	—	1	—	—	—	—
Debility, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—
Anencephalus,	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Hydrocephalus,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Atelectasis, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Spina Bifida,	—	—	1	1	—	—	—	—	—	—	—	2	—	1	2	—	—	—	2
Fracture of Arm,	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Prolapse Cord,	—	1	2	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—
Other causes,	1	3	—	6	1	—	—	—	1	1	—	13	3	2	3	6	7	4	5
	1	168	134	103	4	5	1	4	18	22	5	465	313	228	189	146	167	158	170

Payment of Doctors' Claims.—The claims sent in by medical practitioners under Section 22 of the Act numbered 121, and amounted to £139 3s. 6d., as compared with 51 for the previous year, amounting to £61 17s. 6d. The social circumstances were such as to warrant recovery of £68 19s. 9d. from the husbands or guardians, but of this amount the sum actually repaid amounted only to £18 12s. 6d.

Provision of Certified Midwives in Necessitous Cases.—The cost of the attendance of a certified midwife was met by the Local Authority in 6 cases, the fee paid being 25s. per case.

Compensatory Fees.—In 19 instances where a midwife called a medical practitioner to her assistance, the patient was removed to hospital, and in each case a compensatory fee of 10s. was paid to the midwife.

Liability to be a Source of Infection.—Twelve notifications were received from midwives on account of scarlet fever, 1; ophthalmia neonatorum, 2; puerperal fever, 2; influenza, 1; sapræmia, 2; septic condition, 2; measles, 2.

Form of having Laid out a Dead Body.—Four notifications were received, 2 being for mothers and 2 for infants.

Notification of Death.—Three notifications of the deaths of infants were received.

Intention to Practice.—A list of the midwives who notified their intention to practice during the year was forwarded to the Board on 6th February, 1925.

III. GENERAL SANITATION.

In the Report of the District Sanitary Inspector, which is incorporated, will be found an account of the work done under the headings, "Houses Let in Lodgings"; "Tents, Vans, and Sheds"; "Workshops"; "Scavenging"; "Private Streets"; "Nuisances"; "Interments," &c.

Housing.

The Housing Act, 1924, was placed on the Statute Book during the current year and provided for an extension until 1939, of the subsidy, as defined in the 1923 Act. The reason which has been urged for the extension of the subsidy period is that there must be a long term house-building programme in order to secure the goodwill and effective co-operation of building employers and operatives; in other words, that it is essential to stabilise the building industry.

The action taken by the Public Health Department for the improvement of existing dwellings by the introduction of modern sanitary conveniences and public services, is dealt with in detail in the Sanitary Inspector's Report, and a brief reference here will suffice. Considerable progress was made during the year in carrying out structural alterations and improvements. The work undertaken by the Building Inspector is fully dealt with in his report, which is incorporated herewith.

Post-War Housing Scheme.—The following tabular statement shows the progress made in connection with the erection of State-aided houses during the years, 1921 to 1924, inclusive :—

Year.	Houses Occupied.	Houses Ready for Occupation.	Houses in Progress.	Total.
1921, ...	253	85	2,300	2,638
1922, ..	1,344	152	1,822	3,318
1923,	3,054	65	297	3,416
1924, ...	3,365	1	168	3,534

The position of the post-war housing scheme at the close of the year is shown in detail in the following statistical information, supplied by Mr. P. C. Smith, the Committee's Housing and Town Planning Engineer :—

POST-WAR HOUSING SCHEME—PROGRESS OF WORK.

SCHEME.	Houses occupied.	Ready for occupation.	Houses in progress.	Finishing.	Plastered or ready for plasterer.	Roofed and slated or ready for slater.	Ready for roof.	Main joist level.	Sleeper joist level.	Foundations.
Strathaven, - -	98	—	—	—	—	—	—	—	—	—
Auchinraith, - -	270	—	—	—	—	—	—	—	—	—
Larkfield, - -	—	—	50	—	16	14	4	10	—	6
Bothwell Road, -	122	—	—	—	—	—	—	—	—	—
Viewpark, - -	200	—	—	—	—	—	—	—	—	—
Tannochside, - -	40	—	—	—	—	—	—	—	—	—
Calder Road (West),	210	—	—	—	—	—	—	—	—	—
Calder Road (East),	56	—	—	—	—	—	—	—	—	—
North Road, - -	40	—	—	—	—	—	—	—	—	—
Gas Works, - -	176	—	—	—	—	—	—	—	—	—
Coronation Road, -	88	—	—	—	—	—	—	—	—	—
Chapelhall, - -	50	—	—	—	—	—	—	—	—	—
Newarthill, - -	94	—	8	4	4	—	—	—	—	—
Carnbroe, - -	26	—	—	—	—	—	—	—	—	—
Croft Road, - -	112	—	—	—	—	—	—	—	—	—
Wellshot, - -	88	—	—	—	—	—	—	—	—	—
Lightburn, - -	190	—	—	—	—	—	—	—	—	—
Tollpark, - -	90	—	—	—	—	—	—	—	—	—
Overtown, - -	114	—	—	—	—	—	—	—	—	—
Hamilton Road, -	115	1	—	—	—	—	—	—	—	—
Hareleeshill, - -	134	—	—	—	—	—	—	—	—	—
Ashgillhead, - -	80	—	—	—	—	—	—	—	—	—
East Kilbride, - -	86	—	—	—	—	—	—	—	—	—
Meikle Earnock, -	34	—	—	—	—	—	—	—	—	—
Greengairs, - -	20	—	—	—	—	—	—	—	—	—
Calderbank, - -	112	—	—	—	—	—	—	—	—	—
Carmyle, - -	30	—	28	8	20	—	—	—	—	—
Baillieston, - -	200	—	—	—	—	—	—	—	—	—
Broomhouse, - -	30	—	—	—	—	—	—	—	—	—
Shotts, - -	278	—	22	—	—	—	—	6	8	8
Harthill, - -	28	—	60	22	22	16	—	—	—	—
Cleland, - -	50	—	—	—	—	—	—	—	—	—
Salsburgh, - -	44	—	—	—	—	—	—	—	—	—
Stonehouse, - -	60	—	—	—	—	—	—	—	—	—
Total, -	3,365	1	168	34	62	30	4	16	8	14

With regard to the provision by the Local Authority of additional houses under the Housing, &c., Act, 1923, to provide 750 houses under the Subsidy Scheme, negotiations were still proceeding with regard to the acquisition of sites, at the close of the year.

Improvement of Insanitary Areas.—The progress made with regard to the provision of these houses is the same as with the houses to be erected under the Housing, &c., Act, 1923.

The question of the erection of two-apartment houses was under consideration, and after representations were made to the Scottish Board of Health, they agreed that a maximum of 25 per cent. under both the Subsidy Scheme, and the scheme for the clearing of insanitary areas, could be of two apartments.

The general position with regard to the formulation of a definite Town-Planning Scheme for the Shotts and Dykehead Area is unchanged from the previous year.

Water Supply.

During the year, samples of water were taken for chemical analysis from one public source and four private sources, viz. :—Forrestfield; Craigbank Farm, Larkhall; Graynes Farm, Strathaven; Headhouse Farm, East Kilbride, and Blairmuckhill, Shotts.

In connection with the public supply, an extension of the water pipe met the application put forward by the householders of Forrestfield Village, for an adequate water supply.

The four samples taken from the private sources at Larkhall, Strathaven, East Kilbride, and Shotts, were all found on examination to be unsatisfactory.

The complaint in connection with Headhouse Farm, East Kilbride, was satisfactorily dealt with, the other three still being under consideration at the close of the year.

Drainage and Sewage Disposal.

The work done under this heading will be found in detail in the Sanitary Inspector's report and in the Rivers Pollution Prevention section of the County report.

Dairies.

The four producers' licences granted last year under the Milk (Special Designations) Order (Scotland), 1923, were again issued for

the current year. One additional licence was granted under the Order, making a total of five, as follows:—

No.	Name of Licensee.	Location of Premises.	Nature.
1.	Lord Hamilton of Dalzell,	Dalzell Home Farm,	Certified Milk.
2.	Wood, Andrew,	Nerston, East Kilbride,	Grade A Milk.
3.	Middle Ward District Committee,	Hairmyres Colony, East Kilbride,	Certified Milk.
4.	Murray, James,	Stramolloch, Chapelton,	Grade A (T.T.) Milk.
5.	More, Eben., & Coy. Ltd.,	Dalmacoulter Farm, by Airdrie,	Grade A (T.T.) Milk.

An application for a Grade A (tuberculin tested) milk licence was received towards the end of the year from Mr. Thomas Lambie, Drumbuie Farm, East Kilbride, but this had not been granted at the close of the year.

When the last inspection was carried out at Dalzell Home Farm, it was ascertained that the daily yield of milk was $52\frac{1}{2}$ gallons. The bulk of this supply was retailed locally, the remainder being sent to Glasgow and Edinburgh.

The daily yield of milk at Nerston, East Kilbride, amounting to 61 gallons in October of this year, was practically all sold as ordinary milk to a distributor in Glasgow.

The last inspection of the herd at Hairmyres Colony, East Kilbride, was made in December, 1924, when it was found that of the $58\frac{1}{2}$ gallons being produced, $53\frac{1}{2}$ were used at the institution, while the remaining five gallons were sent to the County Hospital, Blantyre.

In December, the daily production of milk at Stramolloch Farm, Chapelton, was 17 gallons. Of this, 12 gallons were supplied to the County Sanatorium, Stonehouse, the remainder being retailed as ordinary milk. Application was made in December by the licensee for a bottlers' licence in addition to his Grade A milk licence, and the application was still under consideration at the close of the year.

When the last official inspection was made at Dalmacoulter Farm, it was reported that certain repairs had been carried out, and that the methods of handling the milk had been greatly improved, thereby ensuring a purer supply of milk. Of the daily yield of $51\frac{1}{2}$ gallons,

15 gallons were supplied to Uppertown Sanatorium, Longriggend, 31 gallons retailed in Airdrie and Coatbridge, and $5\frac{1}{2}$ gallons used for other purposes.

The sanitary condition of dairy farm premises received considerable attention from the Public Health staff during the year, and, as a result, plans have been lodged for the erection of six new byres.

STAFFING ARRANGEMENTS.

Dr. Norman Edgecombe was appointed clinical assistant to Dr. Johnstone at Hairmyres Colony, East Kilbride, in lieu of Dr. Arthur Anderson, who resigned towards the close of the year.

Report by the Buildings Inspector.

Building Regulations.

The plans submitted during the course of the year amounted to 191, a considerable number of which had not been prepared according to the By-laws, thus necessitating a great deal of correspondence and numerous meetings before matters were adjusted. Three sets of plans were withdrawn. During the course of construction of the buildings 1,266 inspections were made, resulting in the detection of a number of contraventions which were reported to and dealt with by the Committee.

831 smoke tests were made of the drains and plumber work of new properties. As in the previous year, special attention was paid to this work, with a view to having all tests carried out immediately, in order to ensure the utmost progress in connection with the houses, and it is pleasing to report that not one single complaint of delay was received.

In addition to the plans lodged under the Building By-laws, 89 plans were received and approval granted for various erections of a minor character.

NEW BUILDINGS UNDER BY-LAW No. 41.—Houses and shops, 102; workshops, 13; public buildings, 26; and other buildings, 6; total plans, 147.

Welfare Centres are still the outstanding feature of the public buildings for which plans were approved. Nearly every district has now got its centre, and there is no doubt that during the long winter evenings especially in the outlying districts, these buildings, which are designed for comfort, healthy amusement, and education, will be greatly taken advantage of. In many cases bowling greens have been provided, which will form a special attraction during the summer months.

ALTERATIONS IN THE MODE OF OCCUPANCY UNDER BY-LAW No. 51.—Houses and shops, 22; workshops, 7; public buildings, 11; and other buildings, 1; total plans, 41.

HOUSING, &c., ACT, 1923.—40 plans, comprising 359 houses, were dealt with. A number of the plans and specifications required adjustment, but all were made to conform to the regulations issued by the Scottish Board of Health. Two plans, comprising 90 houses, were withdrawn. Operations were commenced in 30 cases. A large number of the houses commenced in 1923 and present year have been completed, and Certificate B for grant earned has been issued to 10 owners.

Private individuals continue to take advantage of the benefits under this scheme. There is considerable extra work involved in the inspection of the plans, specifications, and buildings, but it is found that in nearly every case the owners desire to erect their buildings on good substantial lines, and little trouble is experienced with departures from the plans or specifications, which are carefully adhered to.

Housing, Town Planning, &c. (Scotland) Act, 1919 (a).

Seven applications (embodying 96 houses of two apartments) under Section 44 of the above Act were received for the erection and conversion of existing dwellings into two-apartment houses. (See Table II.)

The plans for these were in all cases reported to the Public Health and Housing Committees, and approved only after very careful consideration.

TABLE I.—NUMBER OF SETS OF PLANS LODGED DURING THE YEAR 1924,
IN ACCORDANCE WITH BY-LAWS 41 AND 51, CLASSIFIED ACCORDING
TO THE NATURE OF THE BUILDINGS SET FORTH IN PLANS.

PARISH.	Plans lodged for New Buildings under By-Law 41.				Plans lodged for alterations in mode of occupancy of Existing Buildings under By-Law 51.			
	Houses and Shops.	Work- shops.	Public Buildings.	Others.	Houses and Shops. *	Work- shops.	Public Build- ings.	Others.
Avondale, - -	3	1	...	...	...	...	...	...
East Kilbride, -	11	...	...	1	3	...	...	...
Glasford, - -	1	...	...	...	...	...	...	...
Stonehouse, - -	...	2	...	...	...	...	...	...
Blantyre, - -	4	2	...	...	...	...	...	...
Bothwell, - -	14	4	9	2	6	1	3	...
Cambuslang, - -	9	...	1	1	...	1	...	1
Cambusnethan, -	12	...	3	1	4	2	..	...
Dalserf, - -	8	1	2	...	1	...	...	...
Dalziel, - -	...	...	...	1	...	...	1	...
Hamilton, - -	2	...	1	...	2	...	2	...
New Monkland, -	4	...	2	...	1	1	1	...
Old Monkland, -	7	...	5	...	...	...	...	...
Shotts, - - -	27	3	3	...	5	2	4	...
MIDDLE WARD, -	102	13	26	6	22	7	11	1
TOTAL FOR 1923, -	96	15	33	13	32	6	7	1

* In this column are included plans for additions to existing dwelling-houses. In this way 19 apartments were added to 10 houses.

TABLE II.—SHOWING NUMBER OF HOUSES AND SHOPS SET FORTH IN PLANS SUBMITTED UNDER BY-LAWS REGULATING THE BUILDING OR REBUILDING OF HOUSES OR BUILDINGS DURING 1924.

PARISH.	NEW BUILDINGS OF						TOTAL.
	One Apartment.	Two Apartments.	Three Apartments.	Four Apartments.	Five Apartments and upwards.	Shops.	
Avondale, - -	2	3	1	6
East Kilbride, -	3	3	6	...	12
Glasford, - -	1	...	...	1
Stonehouse, -
Blantyre, - -	27	25	1	...	53
Bothwell, - -	...	7	15	7	7	6	42
Cambuslang, -	22	31	11	...	64
Cambusnethan, -	...	48	116	10	1	9	184
Dalserf, - -	3	2	5	10
Dalziel, - -
Hamilton, - -	...	2	1	...	1	...	4
New Monkland,	...	12	30	10	1	1	54
Old Monkland, -	1	4	5	...	10
Shotts, - -	...	27	165	20	1	19	232
MIDDLE WARD,	...	96	380	116	39	41	672
TOTAL FOR 1923,	...	20	129	173	253	25	600

Meat Inspection—Slaughter Houses, &c.

ALEXANDER CAMERON, A.R.SAN.I.

As General Superintendent of Abattoirs and District Meat Inspector, I have to submit the following report:—

It will be observed from Table I that 1,206 carcasses were totally or partially condemned, and 4,730 carcasses found with local conditions in which organs only had to be condemned, these combined being 28·11 per cent. of the total animals slaughtered.

Of the 5,936 diseased animals, 4,418 were affected with tuberculosis, of which 209 were totally, 900 partially, and 3,309 cases in which organs only were condemned.

Tables II and III show in detail, for each slaughterhouse, the class of animals slaughtered, and the extent to which disease was prevalent, both in abattoirs and private slaughterhouses throughout the district.

Table IV shows the number of organs and the diseases for which they were condemned, in cases where organs only were condemned, in abattoirs and private slaughterhouses.

TABLE I.

Animals Slaughtered.		Carcases condemned wholly or partially. Carcases in which the Organs only were condemned.											
		Tuberculosis.						Other Diseases.					
		Carcases.				Organs only.		Carcases.				Organs only.	
Class.	Num- ber.	Wholly.		Partially.				Wholly.		Partially.			
		No.	%.	No.	%.	No.	%.	No.	%.	No.	%.	No.	%.
Cattle, -	10,752	175	1·62	896	8·33	3,204	29·79	38	·35	32	·29	11·80	10·97
Calves, -	1,762	25	1·41	—	—	—	—	13	·74	—	—	—	—
Sheep, -	6,933	—	—	—	—	—	—	10	·14	—	—	212	3·05
Swine, -	1,611	9	·55	4	·24	105	6·51	4	·24	—	—	29	1·8
Horses, -	54	—	—	—	—	—	—	—	—	—	—	—	—
Total, -	21,112	209	·98	900	·42	3,309	15·67	65	·3	32	·15	1,421	6·73

Bellshill.—TABLE II.—ANIMALS SLAUGHTERED, NUMBER HAVING CARCASSES WHOLLY OR PARTIALLY CONDEMNED, AND NUMBER HAVING ORGANS ONLY CONDEMNED.

Animals Slaughtered.		Carcases condemned wholly or partially. Carcases in which the Organs only were condemned.					
		Tuberculosis.			Other Diseases.		
		Carcases.		Organs only.	Carcases.		Organs only.
Class.	Number.	Wholly.	Partially.		Wholly.	Partially.	
Cows, -	1,871	92	400	497	19	18	330
Heifers, -	496	6	7	47	1	2	28
Bulls, -	45	1	1	11	—	—	3
Bullocks, -	591	—	5	20	—	1	40
Calves, -	130	5	—	—	1	—	—
Sheep, -	1,471	—	—	—	3	—	116
Swine, -	322	2	4	15	1	—	2
Total, -	4,926	106	417	590	25	21	519

Bellshill.—TABLE III.—OTHER DISEASES FOR WHICH CARCASSES WERE TOTALLY OR PARTIALLY CONDEMNED.

DISEASE.	Cows.	Heifers.	Bulls.	Bullocks.	Calves.	Sheep.	Swine.	Total.
Abscess, -	2	—	—	—	—	—	—	2
Cellulitis, -	1	—	—	—	—	—	—	1
Dropsy, General,	6	—	—	—	—	—	—	6
Emaciation, Phys.,	1	—	—	—	—	2	1	4
Gastro-Enteritis,	1	—	—	—	—	—	—	1
Gangrene, -	1	—	—	—	—	—	—	1
Gastritis, -	1	—	—	—	—	—	—	1
Injury, -	11	1	—	1	—	—	—	13
Jhones' Dis, -	—	1	—	—	—	—	—	1
Lymphadenoma,	—	1	—	—	—	—	—	1
Malignant Neoplasms,	1	—	—	—	—	1	—	2
Melanosis, -	1	—	—	—	—	—	—	1
Œdema, -	3	—	—	—	—	—	—	3
Osteomyelitis, -	2	—	—	—	—	—	—	2
Pleurisy, -	1	—	—	—	—	—	—	1
Pyæmia, Umbil.,	1	—	—	—	1	—	—	2
Septicæmia, -	1	—	—	—	—	—	—	1
Septic Metritis, -	3	—	—	—	—	—	—	3
	37	3	—	1	1	3	1	46

Blantyre.—TABLE II.—ANIMALS SLAUGHTERED, NUMBER HAVING CARCASSES WHOLLY OR PARTIALLY CONDEMNED, AND NUMBER HAVING ORGANS ONLY CONDEMNED.

Animals Slaughtered.		Carcases condemned wholly or partially. Carcases in which the Organs only were condemned.					
		Tuberculosis.			Other Diseases.		
Class.	Number.	Carcases.		Organs only.	Carcases.		Organs only.
		Wholly.	Partially.		Wholly.	Partially.	
Cows, -	1,547	34	236	799	5	6	145
Heifers, -	221	7	5	7	3	—	11
Bulls, -	42	—	—	3	—	—	2
Bullocks, -	282	—	—	9	—	—	25
Calves, -	364	8	—	—	1	—	—
Sheep, -	905	—	—	—	1	—	35
Swine, -	385	1	—	11	1	—	1
Total, -	3,746	50	241	829	11	6	219

Blantyre.—TABLE III.—OTHER DISEASES FOR WHICH ANIMALS WERE TOTALLY OR PARTIALLY CONDEMNED.

DISEASE	Cows.	Heifers.	Calves.	Sheep.	Swine.	Total.
Bruisings, Extensive,	2	—	—	—	—	2
Decomposition, -	1	—	—	—	—	1
Emaciation, Phys., -	1	3	—	1	—	5
Fibro-Sarcoma, -	1	—	—	—	—	1
Paralysis of Brain, -	—	—	—	—	1	1
Peritonitis, -	3	—	—	—	—	3
Pleuritis, -	2	—	—	—	—	2
Pyæmia, Umbil., -	—	—	1	—	—	1
Septic Mammitis, -	1	—	—	—	—	1
	11	3	1	1	1	17

Larkhall.—TABLE II.—ANIMALS SLAUGHTERED, NUMBER HAVING CARCASSES WHOLLY OR PARTIALLY CONDEMNED, AND NUMBER HAVING ORGANS ONLY CONDEMNED.

Animals Slaughtered.		Carcases condemned wholly or partially. Carcases in which the Organs only were condemned.					
		Tuberculosis.			Other Diseases.		
Class.	Number.	Carcases.		Organs only.	Carcases.		Organs only.
		Wholly.	Partially.		Wholly.	Partially.	
Cows, -	1,044	17	178	526	5	4	44
Heifers, -	241	2	1	56	—	—	13
Bulls, -	40	1	—	13	—	—	2
Bullocks, -	473	—	1	48	—	—	37
Calves, -	233	2	—	—	1	—	—
Sheep, -	778	—	—	—	4	—	40
Swine, -	257	4	—	40	2	—	25
Total, -	3,066	26	180	683	12	4	161

Larkhall. — TABLE III.—OTHER DISEASES FOR WHICH CARCASSES WERE TOTALLY OR PARTIALLY CONDEMNED.

DISEASE.	Cows.	Calves.	Sheep.	Swine.	Total.
Emaciation, -	2	—	—	2	4
Injury, -	2	—	1	—	3
Pericarditis, -	1	—	—	—	1
Peritonitis, -	—	—	1	—	1
Pneumonia, -	—	1	2	—	3
Pyæmia, Umbil.,	1	—	—	—	1
Septicæmia, -	2	—	—	—	2
Septic Mastitis,	1	—	—	—	1
	9	1	4	2	16

Strathaven.—TABLE II.—ANIMALS SLAUGHTERED, NUMBER HAVING CARCASSES WHOLLY OR PARTIALLY CONDEMNED, AND NUMBER HAVING ORGANS ONLY CONDEMNED.

Animals Slaughtered.		Carcases condemned wholly or partially. Carcases in which the Organs only were condemned.					
		Tuberculosis.			Other Diseases.		
		Carcases.		Organs only.	Carcases.		Organs only.
Class.	Number.	Wholly.	Partially.		Wholly.	Partially.	
Cows, -	809	7	11	494	1	1	212
Heifers, -	240	2	—	100	—	—	33
Bulls, -	39	—	—	9	—	—	13
Bullocks, -	9	—	—	—	—	—	1
Calves, -	651	8	—	—	7	—	—
Sheep, -	1,041	—	—	—	1	—	10
Swine, -	283	—	—	28	—	—	—
Total, -	3,072	17	11	631	9	1	269

Strathaven.—TABLE III.—OTHER DISEASES FOR WHICH CARCASSES WERE TOTALLY OR PARTIALLY CONDEMNED.

DISEASE.	Cows.	Calves.	Sheep.	Total.
Dropsy, General, -	—	1	—	1
Gangrene, - - -	1	—	—	1
Gastro-Enteritis, - -	—	1	—	1
Injury, - - - -	—	1	—	1
Jaundice, - - -	—	—	1	1
Septic Metritis, - -	1	—	—	1
Pyæmia, Umbil., -	—	4	—	4
	2	7	1	10

Shotts.—TABLE II.—ANIMALS SLAUGHTERED, NUMBER HAVING CARCASSES WHOLLY OR PARTIALLY CONDEMNED, AND NUMBER HAVING ORGANS ONLY CONDEMNED.

Animals Slaughtered.		Carcases condemned wholly or partially. Carcases in which the Organs only were condemned.					
		Tuberculosis.			Other Diseases.		
		Carcases.		Organs only.	Carcases.		Organs only.
Class.	Number.	Wholly.	Partially.		Wholly.	Partially.	
Cows, -	1	—	—	—	—	—	—
Heifers, -	52	—	—	4	—	—	3
Bulls, -	3	—	—	—	—	—	—
Bullocks, -	647	—	3	57	—	—	31
Calves, -	55	—	—	—	—	—	—
Sheep, -	499	—	—	—	—	—	—
Swine, -	35	1	—	—	—	—	—
Total, -	1,292	1	3	61	—	—	34

Baillieston.—TABLE II.—ANIMALS SLAUGHTERED, NUMBER HAVING CARCASSES WHOLLY OR PARTIALLY CONDEMNED, AND NUMBER HAVING ORGANS ONLY CONDEMNED.

Animals Slaughtered.		Carcases condemned wholly or partially. Carcases in which the Organs only were condemned.					
		Tuberculosis.			Other Diseases.		
		Carcases.		Organs only.	Carcases.		Organs only.
Class.	Number.	Wholly.	Partially.		Wholly.	Partially.	
Cows, -	164	3	20	209	1	—	32
Heifers, -	280	—	1	70	1	—	16
Bulls, -	19	—	—	5	—	—	1
Bullocks, -	24	—	—	7	—	—	—
Calves, -	234	1	—	—	3	—	—
Sheep, -	1,345	—	—	—	—	—	5
Swine, -	45	1	—	5	—	—	1
Horses, -	54	—	—	—	—	—	—
Total, -	2,165	5	21	296	5	—	55

Baillieston.—TABLE III.—OTHER DISEASES FOR WHICH CARCASSES WERE TOTALLY OR PARTIALLY CONDEMNED.

Disease.	Cows.	Heifers.	Calves.	Total.
Decomposition, . -	—	1	—	1
Mammitis, Acute Septic, -	1	—	—	1
Pyæmia, Umbil., - -	—	—	3	3
	1	1	3	5

Stonehouse. — TABLE II. — ANIMALS SLAUGHTERED, NUMBER HAVING CARCASSES WHOLLY OR PARTIALLY CONDEMNED, AND NUMBER HAVING ORGANS ONLY CONDEMNED.

Animals Slaughtered.		Carcasses condemned wholly or partially. Carcasses in which the Organs only were condemned.					
		Tuberculosis.			Other Diseases.		
		Carcases.		Organs only.	Carcases.		Organs Only.
Class.	Number.	Wholly.	Partially.		Wholly.	Partially.	
Cows, -	173	2	4	87	2	—	73
Heifers, -	138	1	3	6	—	—	57
Bulls, -	22	—	—	1	—	—	8
Bullocks, -	26	—	—	1	—	—	5
Calves, -	48	—	—	—	—	—	—
Sheep, -	202	—	—	—	1	—	6
Swine, -	65	—	—	—	—	—	—
Total, -	674	3	7	95	3	—	149

Stonehouse.—TABLE III.—OTHER DISEASES FOR WHICH CARCASSES WERE TOTALLY OR PARTIALLY CONDEMNED.

Disease.	Cows.	Sheep.	Total.
Septicæmia, - . - -	1	1	2
Septic Peritonitis, . - . -	1	—	1
	2	1	3

Private Slaughter-Houses.

TABLE II.

District.		Cattle.	Animals Slaughtered.		
			Calves.	Sheep.	Swine.
Greengairs,	-	125	—	32	58
Longriggend,	-	124	4	72	38
Chapelhall,	-	105	3	97	20
Glengowan,	-	139	7	89	33
Newarthill,	-	68	9	37	16
Cleland,	-	299	6	95	6
Harthill,	-	353	18	270	48
Total,	-	1,213	47	692	219

TABLE III.—ANIMALS CONDEMNED—WHOLLY OR PARTIALLY.

Animals Slaughtered.	Tuberculosis.			Other Diseases.		
	Wholly.	Partially.	Organs.	Wholly.	Partially.	Organs.
Cows, -	—	16	70	—	—	3
Heifers, -	—	2	22	—	—	3
Bulls, -	—	—	2	—	—	2
Bullocks, -	—	2	24	—	—	7
Calves, -	1	—	—	—	—	—
Sheep, -	—	—	—	—	—	—
Swine, -	—	—	6	—	—	—
Total, -	1	20	124	—	—	15

TABLE IV.—RETURN OF DISEASES FOR WHICH ORGANS WERE CONDEMNED.
DISEASES.

Organs Condemned.	Tuberculosis.	Abscess.	Actinomycosis.	Pericarditis.	Pleurisy.	Pneumonia.	Cirrhosis.	Distomatosis.	Mammitis.	Neoplasms.	Bacterial Necrosis.	Angioma.	Jones' Dis.	Fatty Infiltration.	Strongylosis Paradoxes.	Congestion.	Cysts.				Total.
																	Echino- cocci.	Cenurus	Cerebralis.	Cysticercus Tenicolis.	
Heads, -	973	2	63	—	—	—	—	—	—	1	—	—	—	—	—	—	—	3	—	—	1,042
Tongues, -	244	2	31	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	278
Lungs, -	2,547	4	—	—	—	4	—	—	—	—	—	—	—	—	5	—	1	—	—	—	2,561
Hearts, -	3	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Livers, -	397	307	1	—	—	—	332	529	—	2	16	29	—	—	—	2	6	—	7	—	1,628
Stomachs, -	115	443	2	—	—	—	—	—	—	2	—	—	1	—	—	—	—	—	6	—	569
Bowels, -	790	58	—	—	—	—	2	2	—	—	—	—	10	—	—	—	—	—	—	—	862
Kidneys, -	115	4	—	—	—	—	—	—	—	—	—	—	—	16	—	—	—	—	—	—	135
Udders, -	78	3	—	—	—	—	—	—	407	—	—	—	—	—	—	—	—	—	2	—	490
Uteri, -	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18
Feet, -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total, -	5,280	823	97	1	—	4	334	531	407	6	16	29	11	16	5	2	7	3	15	—	7,587

Note.—This Table does not include the Viscera of Carcases wholly or partially condemned.

In dealing with emergency cases, all animals are prohibited from entering public abattoirs or private slaughterhouses unless accompanied by a veterinary certificate certifying that the animal is not suffering from a contagious disease as scheduled under the Contagious Diseases (Animals) Act, except in cases of accident or consequent upon calving.

The number of diseased carcasses found at the different abattoirs varied according to the class or quality of animals slaughtered, *e.g.*, at Bellshill, Blantyre, and to a slight extent at Larkhall, there is a turnover of plain cattle for boning purposes.

During the year 54 horses were slaughtered at Baillieston, the horseflesh being exported to Belgium and Holland as in previous years.

BUILDINGS.—The accommodation in the seven abattoirs remains the same as last year. Certain repairs to the boundary fence at Strathaven were carried out, and the extended feu acquired there was duly fenced.

A certain amount of painter work within the abattoirs required to be done, but, as in previous years, this had the attention of the abattoir staff during the quiet period in the month of June.

PRIVATE SLAUGHTERHOUSES.—Ten licenses were granted, and the arrangement for the inspection of meat still continues as previously reported, these private slaughterhouses being organised under the latest meat regulations. The work of inspection has gone smoothly, and the trade have in no way been hampered.

Complaints continue to be received regarding vans (from counties where the system of meat inspection is not so rigorous as in the Middle Ward of Lanarkshire) hawking the district, and a large number of inspections has been made. The position is steadily improving, however, since the inauguration of the Public Health (Meat Inspection) Regulations (Scotland), 1923.

Bye-laws for the private slaughterhouses are in course of preparation, but meantime the certificates are granted on conditions satisfactory to the Local Authority, Medical Officer of Health, and the District Meat Inspector, and are in keeping with the new regulations.

The visits to private slaughterhouses and other places outside abattoirs were as follows :—

Private slaughterhouses, -	-	-	-	-	1,060
Butchers' shops, vans, &c.,	-	-	-	-	1,861

Five special licenses were granted for slaughter of pigs, &c., at farms, and 153 pigs were examined, of which 26 per cent. were found to be more or less seriously affected with tuberculosis.

COLD STORES.—No further steps have been taken in connection with the registration of cold stores, &c., in accordance with the new regulations.

UN SOUND MEAT.—At abattoirs and private slaughterhouses all condemnations were carried out with owners' consent. The total weight of meat and organs condemned outside of abattoirs (including private slaughterhouses, fleshers' shops, and at farms where special licenses for slaughtering were authorised) amounted to 2,869 lbs. All condemned meat and residue from the offal business—which is in the hands of the Local Authority—throughout the district is treated in the digester at Bellshill, producing two products, viz., technical tallow and residue for manure. A quantity of the condemned meat and organs is sold to a knackery in the district, as also is the residue from the Bellshill digester.

Periodic visits were made to the Middle Ward hospitals, and advice given regarding the butcher meat supplied. Assistance was also given in supervising the piggeries at Motherwell and Bellshill hospitals, and in most cases the fattened pigs were turned into bacon for the use of the various Middle Ward institutions.

FOOT-AND-MOUTH DISEASE.—Some inconvenience was caused at Bellshill Abattoir through an outbreak of this disease, which affected the animals in the abattoir piggery. A synopsis of the report on the subject, which was submitted to the Committee at the time of the outbreak, is here incorporated:—

On the afternoon of Wednesday, 30th January, 1924, it was reported that one of the pigs (a brood sow) in the above piggery was inclined to be lame. This animal had previously suffered from rheumatism, but had recovered. The present lameness, however, did not suggest rheumatism; as a matter of fact, I suspected foot-and-mouth disease, and instructed one of the killers to slaughter the pig that afternoon. Owing to a previous appointment, the inspection of the pig was delayed till the following morning, when typical lesions of foot-and-mouth disease on its feet and mouth were detected. The matter was reported to Mr. Begg, Veterinary Inspector of the Local Authority. He called at the abattoir shortly afterwards, and after inspecting the carcass, and also the remainder of the pigs, one or two of which were then showing symptoms, he, too, was satisfied that the disease was present, and communicated with the Ministry of Agriculture officials in Glasgow. The same day Mr. Young of the Ministry called, certified the outbreak as foot-and-mouth disease, and advised

that the whole stock be slaughtered at once. This was done. The abattoir was therefore closed until the place could be certified clear of the disease.

The total number of pigs slaughtered was twelve, and of these two were totally condemned, the heads and feet of four others also being condemned. The sound carcasses were then transferred to the local cold storage, and the condemned carcasses and parts of carcasses were destroyed in the abattoir digester. All the other stock on the premises was slaughtered without delay, and the carcasses were removed to the butchers' shops or put in the cold storage.

Washing of the abattoir premises was carried out with all speed, and the cleaning and disinfection was entirely completed by Tuesday of the following week, when I requested the representative officials of the Local Authority and the Ministry to inspect the premises, and to declare the abattoir open, as it was now free from disease. The premises were duly declared free from infection, and slaughtering began the following morning, so that the abattoir was closed for five working days only.

The officials of the Ministry desired the manure removed to a field, and covered up with earth for a period of six weeks. I pointed out how the manure could remain where it was and there be covered with earth. That arrangement would be much cleaner, and cause less expense. Mr. Young of the Ministry made a special visit, and he ultimately agreed to leave the manure in the pit, provided it was covered up. I then communicated with the Road Department, and had road scrapings carted on to the dungstead, and thickly spread over the manure. The manure pit was then fenced in, and when finished there was no possibility of any animal, large or small, entering it. At the end of six weeks I made arrangements to remove this manure, which was of good quality, to the gardens of Calderbank House. This was approved of by the Medical Officer of Health, and also by the officials of the Ministry, as most satisfactory, and evaded the danger of removing the manure to a farm. That finished the outbreak so far as we were concerned.

The 12 pigs slaughtered consisted of 3 brood sows and 2 gilts, all in pig, and due between February and May, 2 young gilts between three and four months, which were bred on the premises, and 4 pigs ten weeks' old, also bred on the premises. There was also a large white pedigree boar. The young pigs were in a separate pen from that of the older pigs, and were not involved in the outbreak, but it was necessary to slaughter all animals on the premises so as to have the place declared free as quickly as possible in the interests of the business. It was certainly a loss to slaughter the brood sows, and the profits of the year were thereby lost on account of that, and also the fact that the carcasses had to be sold at reduced prices.

On looking over the accounts of income and expenditure for the year, I find that the cost of stock and feeding has been fully cleared by the sales of pork. The reduction in value, and loss of the pigs slaughtered on account of foot-and-mouth disease, was equivalent to, approximately, £60.

Inquiries by the Ministry officials went to show that the infection was very probably brought to Bellshill from Biggar by some sheep. These sheep had been grazing for a few days in the abattoir park, where the pigs were also allowed out for exercise. The sheep were slaughtered before any clinical symptoms had appeared. On account of several cases of a similar nature at abattoirs, the Board of Agriculture issued an order prohibiting the keeping of live stock for store purposes at public abattoirs, so that pigs cannot now be kept at a public abattoir while these regulations are in force. It is gratifying to know that no further outbreaks occurred in this centre.

Owing to the outbreak of foot-and-mouth disease, and the consequent restrictions on the movement of cattle, the amount of slaughtering done in the various abattoirs was adversely affected.

Report of the Sanitary Inspector.

HOUSING.

The administrative procedure during the year 1924 under the Housing Acts, which was summarised in the information supplied to the Scottish Board of Health, in terms of Article 5 of the Board's Regulations, for the purpose of Section 17 (1) of the Housing and Town Planning, &c., Act, 1909, is given in the following tabular statement and subsequent paragraphs:—

Number of dwellings inspected,	-	-	-	-	664
Number of houses found unfit for human habitation,	-	-	-	-	100
Representations to Local Authority,	-	-	-	-	—
Closing Orders made,	-	-	-	-	—
Defects remedied without making Closing Orders,	-	-	-	-	—
Work completed,	-	-	-	-	124
Work in progress,	-	-	-	-	20
In negotiation,	-	-	-	-	420

Insanitary Dwellings.

During the year the Department have still been pressing for the introduction of modern domestic and sanitary conveniences to existing dwellings. Numerous inspections were made, and meetings held with owners of properties, and, although difficulties have been experienced in view of the continued high cost of carrying out improvements, a considerable amount of progress has been made. The properties dealt with are briefly referred to as under:—

Priestfield Terrace, High Blantyre.—11 two-apartment, 2 three-apartment, and 1 four-apartment dwellings, referred to on page 150 of last Annual Report. Each of these 14 dwellings has now been provided with an inside sink, water supply, and a water-closet.

151-155 Main Street, High Blantyre.—The 5 one-apartment and 3 two-apartment dwellings without an adequate water supply and water-closet accommodation, referred to on page 151 of last Annual Report, have not yet been finally dealt with.

128-132 Main Street, High Blantyre.—2 one-apartment, 2 two-apartment, and 1 three-apartment dwellings, also a shop presently used as a dwelling, with only one water-closet for the six occupancies, referred to on page 151 of last Annual Report. The work of providing two additional water-closets has now been completed.

87-95 *Stonefield Road, Blantyre.*—A two-storey stone-built property comprising 12 one-apartment, 1 two-apartment, and 1 three-apartment dwellings, with only two water-closets for the fourteen occupancies, referred to on page 151 of last Annual Report. A plan was duly lodged by the owner showing the provision of five additional water-closets, which, with the two existing closets, would provide one closet for every two tenants. The Committee agreed to accept these as a temporary provision. The factorship of the property afterwards changed hands, and the new factors intimated that they considered the demands of the Committee for five new water-closets quite unreasonable, and that one new water-closet on each stairhead would meet the present requirements, in view of the fact that they proposed to recommend the proprietor to take the first opportunity which occurred to convert the present single-apartment houses into houses of two apartments each.

The Committee resolved that they could not accept the proposals now put forward on behalf of the owner, and that the provision of five additional water-closets was the minimum temporary provision which might be accepted meantime. No work had been done at the close of the year.

69-95 *Glasgow Road and 2-22 Auchenraith Road, Blantyre.*—1 one-apartment, 24 two-apartment, 9 three-apartment, and 7 shop dwellings and 1 shop, referred to on page 152 of last Annual Report. Plans were submitted and approved for two instalments of additional water-closets at this property, the first being for the provision of ten closets, and the second for seven new closets and the conversion of two existing trough closets into pedestal closets. The work is in progress.

Priory Cottages, Blantyre.—8 two-apartment and 2 three-apartment dwellings. The owners submitted proposals for the erection of a scullery, fitted with inside sink, water supply, and a water-closet, for each of the 8 two-apartment dwellings, also a water-closet for each of the 2 three-apartment dwellings, entrance to which could be got from the existing sculleries at these houses, also the introduction of a sink and water supply to these sculleries. The work has since been completed.

119-133 *Main Street, High Blantyre.*—A three-storey stone-built tenement, with attics, comprising 7 one-apartment, 11 two-apartment, and 3 three-apartment dwellings, together with 5 shops, or, in all, twenty-six occupancies with only four water-closets. The matter was

taken up with the owners, and, after a meeting at the property at which certain structural difficulties were discussed, a plan was sent for the approval of the Committee, showing the provision of five new water-closets, which, with the four existing closets, would make nine closets for twenty-one tenants. The District Sanitary Inspector reported that, owing to structural difficulties at the property, the proposals put forward were probably the most satisfactory that could be arranged in the circumstances. The Committee agreed to accept the proposals as a temporary provision, and the work has been completed.

48-58 *Broompark Road and 12 Watson Street, Blantyre*.—A two-storey stone-built tenement comprising 6 one-apartment, 5 two-apartment, and 3 three-apartment dwellings, along with a shop, or 15 occupancies in all. The three one-apartment dwellings on the ground floor, numbered 54, 56, and 58 Broompark Road, had no inside water supply, and only three water-closets were provided for the 15 occupancies. Negotiations having failed, the Statutory Notice was served, after which the proprietrix asked a meeting at the property, when various proposals were discussed, and it was arranged that a plan would be sent in showing proposals for the necessary water supply and water-closet accommodation.

140-158 *Main Street and 2-4 School Lane, High Blantyre*. — A two-storey stone-built tenement of 2 one-apartment, 6 two-apartment, 2 three-apartment, 1 four-apartment, and 1 five-apartment dwellings. Insanitary conditions were found existing at this property in consequence of the want of proper domestic and sanitary conveniences. One of the single-apartment dwellings was without an inside water supply. A water-closet on the inside stair landing served four tenants on the upper floor, and two water-closets situated in the backcourt were used by seven tenants on the ground floor, as also by the occupants of the four shops included in the property. The water-closets on the ground floor were also badly situated and at a distance from the dwellings. Negotiations having failed, the whole matter was reported to the Committee, who ordered the service of the Statutory Notice towards the close of the year.

Auchenraith Colliery Houses, Blantyre.—Two rows of single-storey brick-built dwellings comprising 2 one-apartment, 11 two-apartment, 2 three-apartment, and 1 four-apartment houses, or 16 occupancies in all. The three- and four-apartment houses had water inside, and the others were supplied from an outside stand well. The matter was taken up with the Company, who afterwards provided an inside sink and water supply for each dwelling.

Craighead Rows, Blantyre.—The question of improved water-closet accommodation for the three rows of single-storey stone-built dwellings, comprising 106 two-apartment houses, was discussed with the owners, but no arrangement has yet been come to.

111-117 *Main Street High Blantyre.*—The want of inside sinks and water supply for 1 one-apartment and 3 two-apartment attic dwellings was taken up with the factors towards the close of the year.

105-119 *Stonefield Road, Blantyre.*—The want of inside sinks and water supply for 2 one-apartment and 6 two-apartment attic dwellings was taken up with the factors towards the close of the year.

New Orbiston Rows, Bellshill.—The work of providing improved domestic and sanitary conveniences at the 75 dwellings comprising these rows, referred to on page 152 of last Annual Report, has been completed.

Hamilton Palace Colliery.—Further progress has been made in the provision of water-closet accommodation at these rows, referred to on page 153 of last Annual Report. New closets have been erected during the year at Clyde Place, 48 two-apartment dwellings; and Haugh Place, 28 two-apartment dwellings; while some progress is being made at Store Buildings and The Square.

Douglas Park Square.—Referred to on page 153 of last Annual Report. Plans were submitted to the Committee, showing the provision of a scullery fitted with inside sink and water supply, also a water-closet for each of the 1 one-apartment and 27 two-apartment dwellings numbered 1 to 28B, comprising the south and east blocks of Douglas Park Square, Bellshill. The Company also agreed that the single-apartment dwelling should be discontinued, and added to the two-apartment dwelling numbered 28B. The work is in progress.

Bothwellpark Rows.—Referred to on page 153 of last Annual Report. Inside sinks and water supply were introduced to a further instalment of 52 of these dwellings, while the 1 one-apartment, 4 two-apartment, and 1 three-apartment dwellings known as Bothwellpark Cottages, situated at the south end of the rows, were each furnished with an inside water-closet. At the beginning of the year a petition, signed by a large number of the inhabitants of these rows, was received, asking that sewerage facilities be provided. The Committee, however, agreed to defer consideration, as the subject formed part of the larger question of drainage facilities for areas outwith Special Drainage Districts.

24-26 *Hamilton Road, Bellshill*.—The arrangement come to with the owners of this property, that if any of the dwellings became vacant it would not again be re-let, referred to on page 153 of last Annual Report, was broken by the local factor, who let one of the dwellings. The matter was at once taken up with the owners, and the dwelling was vacated.

Tannochside. — After the completion of the new domestic and sanitary conveniences for the dwellings in the north portions of Laidlaw Street and Hozier Street, Tannochside, referred to on page 154 of last Annual Report, the question of inside sinks and water supply, with improved water-closet accommodation, for the dwellings in the southern portions of these streets, was raised with the management, and, after discussion, plans were adjusted for these as follows:—

Hozier Street. — The remaining 50 two-apartment dwellings are each to be provided with a scullery fitted with an inside sink, water supply, and a coal-cellar, while a water-closet will be provided between every two dwellings.

Laidlaw Street. — The remaining 48 two-apartment dwellings in Laidlaw Street are to be provided with a water-closet and a coal-cellar for each house. These dwellings already have sculleries fitted with inside sinks and water supply.

Russell Place. — Eight new towers, each containing two water-closets, are to be erected, which will give one water-closet to every two tenants.

Six new double and a single wash-house are to be erected at convenient positions, which will give wash-house accommodation in the proportion of one wash-house to five tenants.

The improvements are similar to those carried out on the northern portion of the rows, and the work is in progress.

Ettieshore Terrace, Bellshill. — 10 two-apartment dwellings with insufficient water-closet accommodation, referred to on page 154 of last Annual Report. The owner has not yet completed this work.

Wellpark Place, Carnbroe.—5 two-apartment dwellings, referred to on page 154 of last Annual Report. The third water-closet has not yet been erected.

63-69 *Jerviston Street, New Stevenston*. — 6 two-apartment dwellings with insufficient water-closet accommodation, and without inside sinks and water supply, referred to on page 155 of last Annual Report. The owner submitted a plan, showing the provision of a scullery fitted with inside sink and water supply for each of the

ground-floor dwellings, numbered 67 and 69, a new water-closet for the use of these two dwellings, and a scullery on the upper-floor landing, with an inside sink and water supply and a new water-closet to be used in common by the occupants of the two upstairs houses, the tenants of houses numbered 63 and 65 to continue to use the existing outside water-closet. The suggested improvements would bring the water-closet accommodation at the property up to the proportion of one for every two tenants. The Committee agreed to accept the proposals meantime as an instalment of the conveniences necessary to be provided at the property, on the distinct understanding that the owner should submit proposals within a reasonable time for the provision of inside water-closets to the two dwellings which were served by the existing outside water-closet. The work is in progress.

Broadlees, Chapelhall. — 3 one-apartment and 2 two-apartment dwellings without a proper water supply, the water having to be carried from a property about 400 yards distant, referred to on page 155 of last Annual Report. Negotiations with the owners having failed, the Statutory Notice was served, and inside sinks with water supply have now been fitted into each dwelling.

Burnside, Holytown.—The additional water-closet accommodation for the 1 one-apartment and 5 two-apartment dwellings, referred to on page 156 of last Annual Report, has now been completed.

10-12 Main Street, Bothwell. — The want of water-closet accommodation for two shops was brought to the notice of the owners, and a closet was afterwards provided.

Armoury Cottage, Bothwell. — An old two-apartment cottage, situated in Langside Road, was found to be without water-closet accommodation. The matter was taken up with the owners, and, after some delay, a closet was provided.

Albert Terrace, Bellshill. — A two-storey stone-built tenement, situated in Unthank Road, Bellshill, comprising 4 two and 2 three-apartment dwellings, as also an office, was found to have only one water-closet in the back-court, and at some distance, for the use of the seven occupancies. Plans were submitted for the provision of two water-closets on the upper floor for the four dwellings there, and one new water-closet for the two ground-floor dwellings. The Committee agreed to accept these as a temporary provision, and the work has since been completed.

32-38 *Main Street, Bellshill*.—2 one-apartment and 2 two-apartment dwellings. Towards the close of the year the factor was asked to provide each dwelling with an inside sink and water supply.

Cockhill Place, Bothwellpark.—11 two-apartment dwellings. The abolition of the privy midden and the introduction of water-closet accommodation were discussed with the owner, but, in the absence of a satisfactory outlet for the sewage, further consideration was delayed meantime.

58-66 *High Street, Newarthill*.—2 one-apartment, 1 two-apartment, and 1 four-apartment dwellings. The owner has provided three new water-closets and a wash-house.

280-282 *High Street, Newarthill*. — 2 two-apartment dwellings. The owner has provided a new water-closet.

86-92 *High Street, Newarthill*. — 4 one-apartment and 1 two-apartment dwellings. Three new water-closets have been erected.

65-73 *High Street, Newarthill*.—6 one-apartment and 1 two-apartment dwelling. Four new water-closets have been erected.

Brigbrae, Mossend.—4 two-apartment dwellings. Two new water-closets have been erected.

Carfin.—Towards the close of the year the Colliery Company were asked to provide improved conveniences at the 37 one-apartment and 8 two-apartment dwellings known as Stone Row, Byers Knowe, and Back Row, *Carfin*.

Lauchope Place, Chapelhall.—The 18 one-apartment and 12 two-apartment dwellings, numbered 25-37 Woodhall Street, Chapelhall, were inspected, with a view to improved sanitary accommodation being asked for.

Westburn Rows, Cambuslang.—Nothing has been done with regard to the provision of wash-house accommodation at the 84 one-apartment and 2 two-apartment dwellings, referred to on page 156 of last Annual Report.

281, 305-319 *Hamilton Road* and 2, 14, and 22 *Lightburn Road, Cambuslang*.—7 one-apartment, 9 two-apartment, and 1 three-apartment dwellings were found to be without an adequate supply of water, all water being carried from two outside wells in the back area. The owners were asked to provide an inside sink and water supply for each dwelling, and the work was carried out.

The Deans, Cambuslang.—Two old dwellings, 1 of two apartments and 1 of three apartments, were found to be without inside water supply and water-closet accommodation, and the question was raised with the owners towards the close of the year.

Bardykes Terrace, Cambuslang. — The want of adequate water supply and water-closet accommodation at the two-storey brick-built block, comprising 12 two-apartment and 4 three-apartment dwellings, built under the Building By-laws in the year 1907, and situated at Bardykes Terrace, Cambuslang, was brought before the notice of the owners, but the communications were not even acknowledged, and the Statutory Notice was accordingly served.

Clydesdale Rows, Wishaw.—3 one-apartment, 41 two-apartment, and 3 four-apartment dwellings, referred to on page 156 of last Annual Report as being kept wind and water-tight until such time as the tenants can find other accommodation, are still all occupied.

Stane Place, Shotts.—Referred to on page 156 of last Annual Report. Six blocks of single-storey buildings comprising 72 one-apartment back-to-back dwellings, and three blocks of two-storey buildings comprising 44 two-apartment dwellings. Plans were submitted for the reconstruction of the sculleries and stairs at the 44 two-apartment houses, the new sculleries on the ground floor each to have an inside sink and wash tub, with water supply, washing-boiler, inside water-closet, and coal-cellar, while the sculleries on the upper floor were to have similar conveniences, with the exception that the coal-cellar accommodation would be provided underneath the stairs. Plans were approved, and the work has all been completed. The Company will now be asked to deal with the 72 one-apartment dwellings.

Lady's Row and Binnie's Row, Morningside.—These dwellings are referred to on page 157 of last Annual Report—(a) Lady's Row, 6 one-apartment and 2 two-apartment dwellings; and (b) Binnie's Row, 13 one-apartment and 4 two-apartment dwellings. No further progress has been made towards carrying out the mutual arrangement for the closure of these dwellings, as none of the tenants was removed during the year.

Mitchell Place, Morningside.—29 two-apartment dwellings; and *School Row, Chapel*, 6 two-apartment dwellings, referred to on page 157 of last Annual Report. No progress has been made with the provision of modern sanitary conveniences at these dwellings on account of difficulties with regard to sewage disposal.

Chapel Square, Morningside.—19 one-apartment and 5 two-apartment dwellings, referred to on page 157 of last Annual Report. These dwellings are still occupied.

Meadowhill Rows, Larkhall.—The 92 one-apartment and 29 two-apartment dwellings, mostly back-to-back, referred to on page 157 of last Annual Report, continued to receive special inspection. Numerous Intimations and Notices were served on the owner during the year on account of choked water-closets, leaky roofs, &c., as only thus can the improvement of the general sanitary condition of the rows be maintained.

Low Shawsburn.—10 two-apartment dwellings, referred to on page 158 of last Annual Report. The owner having failed to complete the necessary sanitary improvements, instructions were given for the service of the Statutory Notice. The owner afterwards undertook to provide a fifth water-closet and two new wash-houses in the spring of next year, and to introduce inside sinks and water supply during the course of next summer. The Committee agreed to grant the delay desired by the owner, on the distinct understanding that the acceptance of this provision would not prejudice them from calling for the provision of a water-closet for each house at a later date.

Cornsillock Rows, Dalserf.—60 two-apartment dwellings, referred to on page 158 of last Annual Report. No arrangement has yet been come to with the new owners for the provision of approved sanitary conveniences.

Swinhill Terrace, Dalserf.—49 two-apartment, 2 three-apartment, and 1 four-apartment dwellings, referred to on page 158 of last Annual Report. Difficulties have emerged with regard to sewage disposal, and the improvements are consequently in abeyance.

Ayr Road Rows, Dalserf.—40 two-apartment dwellings, referred to on page 159 of last Annual Report. The new owners have not yet arranged for the introduction of modern conveniences.

7-9 M'Neill Street, Larkhall.—2 two-apartment dwellings, referred to on page 159 of last Annual Report. Water-closet accommodation has been provided and the old privy demolished.

2-6 Hamilton Street and 1-17 Duke Street, Larkhall.—9 one-apartment and 3 two-apartment dwellings, with two water-closets for the twelve tenants; and a single-apartment dwelling at 4 Hamilton Street, without inside water supply. No acknowledgment of communications having been received, the Statutory Notice was served on the proprietrix, who afterwards put the matter into the hands of an Architect towards the close of the year.

67-69 *John Street, Larkhall*, 2 one-apartment dwellings; and 71-73 *John Street*, 2 two-apartment dwellings. Water-closet accommodation has been provided for both properties and the privies demolished.

Dykehead Rows, Larkhall.—After protracted negotiations, plans were approved for the provision of new domestic and sanitary conveniences for the 21 two-apartment, 13 three-apartment, and 1 four-apartment dwellings known as Dykehead Rows, Larkhall. Houses Nos. 1 and 2 already had sculleries, and these were now each to be provided with a water-closet, inside sink, and water supply, while the remaining houses (Nos. 3-35) were to be provided with a scullery, fitted with inside sink and water supply, and a water-closet. The work has been completed.

Surgeoner's Rows, Netherburn.—The lease of these dwellings having expired, the property reverted to the Superiors, who endeavoured, unsuccessfully, to dispose of same, and indicated that, if they could find other accommodation for the present occupiers, the dwellings would be demolished. The property consists of two blocks of single-storey one-apartment dwellings, 12 in number, and the existing privy-middens had been a continual source of complaint, but, as the dwellings must necessarily be occupied for some time, and as there are no drainage facilities available at Netherburn, the Superiors agreed to erect two blocks each containing three ash privies of an approved type. As this was the best arrangement that could be made in the circumstances, the Committee agreed that they should be accepted temporarily.

Udston Rows, Hamilton.—There have been no further developments with regard to the proposed reconstruction scheme, referred to on page 160 of last Annual Report.

Home Farm Rows, Hamilton.—10 two-apartment and 1 four-apartment dwellings, referred to on page 160 of last Annual Report. A new scullery, fitted with inside sink, water supply, washing-boiler, water-closet, and coal-cellar, for each dwelling has now been completed.

Eddlewood Rows, Hamilton.—24 one-apartment, 153 two-apartment, 12 three-apartment, and 2 four-apartment dwellings, referred to on page 160 of last Annual Report. Water-closet accommodation has been provided for blocks 6 and 7, and another section is proceeding.

Watson Place, Eddlewood. — 3 shops and 3 two-apartment dwellings, referred to on page 161 of last Annual Report. Plans were approved for the erection of three new water-closets, two of these to be erected on the stair balcony and one on the ground floor. The work has now been completed.

9-15 Kittoch Street, East Kilbride.—4 one-apartment and 2 two-apartment dwellings, referred to on page 161 of last Annual Report. The owner having failed to comply with the terms of the notice served on him under the Statute, in respect that he had only provided one water-closet for the six tenants, proceedings were taken for recovery of the penalties. The Sheriff continued the case to give the owner an opportunity of carrying out the necessary work, and two additional water-closets were thereafter provided. When the case was again called, a penalty of £1 or five days' imprisonment was imposed.

20 Maxwellton, East Kilbride. — 2 one-apartment and 1 two-apartment dwellings. Towards the close of the year the owners were asked to have the old privy-midden swept away and water-closet accommodation provided.

Durham Terrace, Busby. — 39 dwellings with only seven water-closets. After negotiations, the Company agreed to provide thirteen additional closets, which would make twenty closets in all. The Committee agreed to accept these as a temporary provision, and the closets have since been erected.

Old Row, Whiterigg, and North Stanrigg.—Old Row, Whiterigg, is a one-storey row of one-apartment dwellings, 20 in number, one of which is unoccupied. North Stanrigg comprises two rows of one-apartment dwellings, 15 of which are still occupied. The walls of both properties are soaking with dampness, the roofs are defective, the floors broken and decayed, and there is want of lighting, ventilation, water supply, and water-closet accommodation. The owners' representative agreed that the dwellings were in an uninhabitable condition, that it was impracticable to carry out any extensive repairs or sanitary improvements, the only course being to have the dwellings shut up at the earliest possible moment, and he agreed that should any house become vacant it would be immediately closed, and that, meantime, the occupied dwellings would be kept wind and water-tight.

Meikle Drumgray, Airdrie.—No arrangement has yet been made for the provision of inside sinks, water supply, and water-closet accommodation for the 20 two-apartment dwellings, referred to on page 161 of last Annual Report, as most of the collieries in the neighbourhood are shut up.

Telegraph Road, Longriggend.—Towards the close of the year the privies and midden at the group of 7 dwellings, 1 one-apartment, 5 two-apartment, and 1 three-apartment, situated on the east side of Telegraph Road, Longriggend, were found to be in a dilapidated and insanitary condition, and the owners have been asked to introduce water-closet accommodation.

Eastfield, Longriggend.—Complaint having been made as to the insanitary condition of the privy-midden and foul surface channels at 4 one-apartment, 6 two-apartment, and 1 three-apartment dwellings, also a shop, situated at Eastfield, Longriggend, the owner has been asked to introduce modern conveniences.

Beech Row, Kirkwood.—The 6 two-apartment dwellings in an uninhabitable condition, referred to on page 161 of last Annual Report, are still occupied.

Calderbank.—No further progress has been made in the matter of improved sanitary conveniences for the dwellings at Old Square and New Square, referred to on page 162 of last Annual Report.

35-49 *Burnside, Baillieston.*—2 one-apartment and 7 two-apartment dwellings, referred to on page 163 of last Annual Report. This case has not yet been finally disposed of by the Sheriff.

8-38 *Camp Road, Baillieston.*—16 two-apartment dwellings, referred to on page 165 of last Annual Report. When the case was called in Court, the defender, who was represented by an Agent, plead guilty in terms of the complaint, but the Agent stated that the owner was in most exceptionally poor circumstances, that the rents of the property were in arrear, and that the owner had no finance to carry out the work. The Sheriff took the view that the case was one of considerable hardship, and continued same until 10th October, 1924, in order to give the defender another opportunity of arranging to have a portion at least of the work executed by that time. A change of Sheriff took place in the interval, and when the case was again called in Court on 10th October, the new Sheriff continued same, and advised the owner that she should communicate with the District Sanitary Inspector and arrange for the erection of an additional dry closet at the property, and indicated that if an additional earth closet was erected he would be inclined to hold this as a sufficient provision, and dismiss the complaint. When this decision was reported to the Committee they decided that they could not concur or acquiesce in any way in the suggestion for the provision of an earth closet, and the Clerk was instructed to take such steps as he might think expedient with a view to the carrying out of the statutory notice for the provision of water-closets.

52-54 *South Carmyle Avenue, Carmyle*.—A tenement property comprising 2 one-apartment, 10 two-apartment, and 2 three-apartment dwellings, or 14 occupancies in all, was found to have only two water-closets. The matter has been taken up with the owners.

Bowhousebog, Hartwood.—Plans for the introduction of a water-closet for each of the 42 dwellings forming the Village of Bowhousebog, referred to on page 157 of last Annual Report, were satisfactorily adjusted, and the work has since been completed. The old ashpits have been removed and each dwelling supplied with a covered galvanized dustbin, the contents of which are removed twice a week.

Garret Row, Shotts.—12 one-apartment back-to-back dwellings, and 6 one-apartment attic dwellings, referred to on page 166 of last Annual Report. No decision has yet been arrived at with regard to the reconstruction proposals and the introduction of modern sanitary conveniences.

84-88 *Shotts Kirk Road, Shotts*. 3 two-apartment dwellings. An inside sink and water supply has been provided for each house. Two new closets have also been provided.

213-217 *Station Road, Shotts*.—2 shops and 2 one-apartment dwellings with an old privy. The owner has been asked to provide water-closet accommodation.

45-50 *Station Road, Shotts*.—The owners of 4 three-apartment dwellings which had two old privy middens have had these structures removed and two water-closets provided.

West Benhar.—8 one-apartment and 147 two-apartment dwellings referred to on page 167 of last Annual Report. In view of the circumstances still prevailing in the neighbourhood with regard to housing accommodation, it was found expedient to make a joint application to the Sheriff to extend, for another year, the date fixed by him for the closing of these houses.

Eastfield Row, Harthill. — 8 single-storey brick-built two-apartment dwellings, and *Peden Place, West Benhar*, two blocks of single storey, brick buildings, comprising 15 two-apartment dwellings. These dwellings are in a dilapidated and damp condition, without proper water supply, and without sanitary conveniences, and the owners were communicated with as to the need for immediate general repair of the dwellings and the introduction of inside sinks, water supply, and water-closet accommodation. The parties interested in the property indicated that the dwellings were in such a condition as

would not justify the expenditure necessary to make them in all respects reasonably fit for habitation, and that they should, therefore, be closed at the earliest possible moment. The Judicial Factor on the estate, however, gave an undertaking that should any of the houses become vacant, such house will not again be re-let. The Committee agreed that the proposal of the Judicial Factor be accepted provided he undertook to keep the premises wind and water-tight, so long as they are occupied.

97-115 *Main Street, Harthill*.—A two-storey tenement property comprising 9 two-apartment and 1 three-apartment dwellings, each having a pail privy. It was suggested that water-closet accommodation might be introduced here, but there are presently difficulties with regard to sewage disposal.

67-95 *Main Street, Harthill*.—A two-storey tenement of 16 two-apartment dwellings, also with privy accommodation, and adjoining the property mentioned in the preceding paragraph, is in the same position with regard to drainage outfall.

Harthill.—The owners of the following properties in Main Street, Harthill, have been asked to provide water-closet accommodation:—No. 27, 1 three-apartment dwelling; 190-192, shop, 1 two-apartment, and 1 three-apartment dwellings; 186-188, 2 three-apartment dwellings; 180-184, 3 two-apartment dwellings; and 172-174, 1 one-apartment and 1 three-apartment dwellings.

Springbank Row, Shotts.—Insanitary conditions were reported at an old stone-built single-storey row of 20 one-apartment and 4 two-apartment dwellings, which were largely due to badly constructed and situated privy middens, foul surface channels, and want of adequate water supply. The owner has been asked to provide water-closet accommodation, and inside sinks with water supply.

Russell's Land, Cleland.—8 one-apartment, 2 two-apartment, and 2 three-apartment dwellings, referred to on page 167 of last Annual Report. It was reported to the Committee that the owner had not yet implemented the undertaking he had given with regard to the conversion of the single-apartment houses into two-apartment houses, and the matter was taken up with him. He replied that no opportunity had occurred during the year to convert any of the single-apartment houses into two-apartment houses. The Committee agreed to insist upon steps being taken within the next six months towards the conversion of the dwellings, or, alternatively, the erection of additional water-closets at the property.

29-31 *Omoa Road, Cleland*.—No further progress has been made with the provision of proper water supply and water-closet accommodation at the 5 one-apartment dwellings and shop referred to on page 168 of last Annual Report.

34-38 *Main Street, Cleland*.—11 dwellings without inside sinks and water supply, and having only two water closets referred to on page 168 of last Annual Report. Plans were approved by the Committee for the erection of three new water-closets as a temporary provision. The owner, however, failed to proceed with the work and action was again taken against him in Court. On the case being called, defender's Agent agreed to pay the expenses and see that the work was proceeded with. The closets were thereafter erected.

65-67 *Main Street, Cleland*.—3 one-apartment and 4 two-apartment dwellings, referred to on page 168 of last Annual Report. The new owner having failed to provide the additional water-closet asked for, proceedings were taken against him. When the case was called, defender's Agents tendered a plea of guilty, and stated that the cause of the delay was that the Contractors had raised difficulties as to the site chosen for the erection of the additional closet, and, in consequence of this statement, the Sheriff continued the case for seven days on the understanding that defender would by that time have the work completed to the satisfaction of the Local Authority. When the case was again called, the Sheriff was informed that the owner had not yet commenced the work, and he imposed a penalty of Forty Shillings with the expenses of the Prosecution. Three months elapsed without anything being done, and a second complaint was raised in Court. After several continuations, the necessary closet was provided, and the case dismissed by the Court with expenses to the Committee.

53-55 *Omoa Road, Cleland*.—2 two-apartment dwellings without water-closet accommodation, referred to on page 169 of last Annual Report. When the case was called in Court, the defender appeared and stated that the houses were damaged by subsidence through mineral workings. The Sheriff continued the case for sentence to give the defender an opportunity for complying with the terms of the notice served on her. Defender thereafter proceeded with the erection of one water-closet, and the Committee agreed that this should be accepted as a temporary provision.

50-62 *Omoa Road, Cleland*.—12 one-apartment dwellings without inside sinks and water supply, referred to on page 169 of last Annual Report. No progress having been made in the negotiations, the statutory notice was served, and a sink with water supply was afterwards provided in each house.

Scott's Land, Omoa Road, Cleland.—12 one-apartment and 4 two-apartment dwellings, without proper sanitary conveniences and in an uninhabitable condition, referred to on page 169 of last Annual Report. The owner's Agents having consulted an architect, the District Sanitary Inspector had a meeting with him at the property, when the whole question was fully discussed, and as a result of that meeting the Agents intimated that, as the houses became vacant, they would not again be relet. The circumstances were reported to the Local Authority, who agreed to take no further action meantime, provided that any house becoming vacant would not be re-let, and, further, that the owner undertook to keep the premises in a reasonable state of repair so long as they were occupied.

122-136 and 137-148 *Omoa Road, Cleland.*—7 one-apartment and 11 two-apartment dwellings, referred to on page 169 of last Annual Report. Negotiations having failed, the statutory notice was served on the Bondholder in possession, requiring the introduction of inside sinks and water supply and the provision of water-closet accommodation. Some correspondence afterwards took place between the Agents for the Bondholder and the District Clerk, in which the Agents represented that, as the cost of the improvements would be great and no return could be obtained for the expenditure from the tenants so long as the Rent Restrictions Acts remained in force, the Committee should not insist upon the terms of the notice being implemented in the meantime, and that, failing the Committee agreeing to this, the Bondholder should be allowed an opportunity of appealing against the notice, in respect that he had been abroad when it was served. The Committee resolved that they must insist upon observance of the statutory notice. The Agents afterwards submitted a sketch, showing their proposals, but the District Sanitary Inspector reported that he was unable to recommend the acceptance of these, as they showed the provision of only eight water-closets for eighteen tenants, and no provisions for inside water supply for three of the single-apartment dwellings. The Committee agreed that, if the Agents gave an undertaking to convert the single-apartment dwellings into houses of two apartments whenever opportunity arose, it might be possible to accept proposals which would ultimately mean that there would be a water-closet for each two houses, after conversion, and inside sink and water supply for each house; but on the distinct understanding that the provisions referred to were only accepted as a temporary measure, without prejudice to the rights of the Committee to call for a water-closet for each house when they deemed this expedient. Such was the position at the close of the year.

Cityside, Greenhill.—A row of old single-storey brick-built dwellings, which originally contained 14 single-apartment back-to-back houses, but now only occupied as 5 one-apartment and 2 two-apartment dwellings, was found to be in an uninhabitable condition. The principal defects were dampness of walls, leaky roofs, dilapidated rhones and conductors, broken plasterwork, decayed windows which cannot be opened, tiled floors irregular and damp, want of inside sinks, water supply, and drainage. The owners agreed that the houses should be closed at the first opportunity, and that meantime they would make them wind and water tight.

Currieside, Shotts.—The condition of this row of six single-storey, stone-built, one-apartment dwellings, with damp walls, defective roofs, and want of proper water supply and closet accommodation, was brought before the owner, who intimated that he was warning the tenants out, in order to take the roofs off and dismantle the dwellings.

Forrestfield.—A gravitation water supply now being available, the owners of the dwellings in the vicinity of Forrestfield Station have been asked to provide inside sinks and water supply, also water-closet accommodation.

29-31 *King Street, Stonehouse.* — 2 two-apartment and 1 three-apartment dwellings, referred to on page 170 of last Annual Report. Negotiations having failed, the statutory notice was served, and a plan was afterwards lodged by the Trustees, showing the provision of two new water-closets, one to be situated on the upper floor for the use of the two tenants there, and the other on the ground floor for the use of the tenant and shop there. The Committee agreed to accept this as a temporary provision, and the work has since been completed.

45-47 *Camnethan Street, Stonehouse.*—2 one-apartment dwellings. —A water-closet has been provided and the privy-midden abolished.

18-22 *New Street, Stonehouse.* — 2 one-apartment and 2 two-apartment dwellings. After negotiations, the owner erected two new water-closets.

41 *Lawrie Street, Stonehouse.* — 3 one-apartment and 1 two-apartment dwellings. The owner has provided two new water-closets, and removed the old privy-midden.

77 *Lawrie Street, Stonehouse.*—1 two-apartment dwelling. The owners have provided a water-closet and removed the pail privy.

12-16 *Kirk Street and 41-47 New Street, Stonehouse*. — 2 one-apartment, 1 two-apartment, 2 three-apartment, and 1 four-apartment dwellings. These had all inside sinks and water supply, with the exception of No. 12 Kirk Street, and the owner was asked to provide a water supply for this house and water-closet accommodation for the whole property. Plans were afterwards submitted to the Committee, showing the provision of six new water-closets and the inside water supply asked for. The work is in progress.

15-23 *Angle Street, Stonehouse*. — After negotiations, the owner submitted proposals for the provision of two new water-closets at the two-storey tenement property, comprising 2 one-apartment and 2 two-apartment dwellings, numbered 19-23 Angle Street, and also an inside sink and water supply for each dwelling. These proposals were accepted by the Committee as a temporary measure. The District Sanitary Inspector called the attention of the Committee to the other portion of the property, numbered 15-17 Angle Street, comprising an old single-storey thatched building of 2 one-apartment and 1 two-apartment dwellings, which are in an uninhabitable condition, on account of leaky roofs, damp walls, &c., and stated that the owner was anxious to have this portion of the property demolished as soon as the present tenants could find other accommodation. He further explained that the water supply for this portion of the property would meantime continue to be drawn from an outside tap, and the tenants would have the use of an existing privy-midden. The Committee agreed not to insist on the provision of additional sanitary conveniences for this portion of the property, provided the owner undertook to keep the premises wind and water tight, and also that, as and when any of the houses became vacant, they would not be relet.

29-31 *Kirk Street, Stonehouse*. — 1 one-apartment, 5 two-apartment, and 1 three-apartment dwellings, without inside sinks, water supply, and water-closet accommodation. A meeting was held with the factor of the property, and the matter was still under consideration at the close of the year.

11-21 *Kirk Street, Stonehouse*. — 6 one-apartment and 2 two-apartment dwellings, without inside water supply and water-closet accommodation. Negotiations having failed, the statutory notice was served on the owner at the close of the year.

Stonehouse. — Negotiations are in progress with the owners of the following properties for the provision of water-closet accommodation: — 39 Lawrie Street and 1-3 Hill Road, 3 one-apartment and

2 two-apartment dwellings; 55-57 King Street, 3 two-apartment dwellings; 9 Green Street, 1 two-apartment dwelling; 50-52 Lockhart Street, 2 two-apartment dwellings; 2-6 Townhead Street, 3 one-apartment and 1 two-apartment dwellings; and 56-58 King Street, 1 two-apartment dwelling and a shop.

INSANITARY AREAS.—A scheme for dealing with certain of the insanitary dwellings in the Middle Ward Area was referred to on page 171 of last Annual Report, and it is disappointing to record that not a single dwelling has been provided during the year. The only contract let was that for the 22 houses at Bonkle, Newmains. The acceptance of the tenders received for the dwellings at Carfin, Holytown, Bargeddie, and Harthill was not approved by the Scottish Board of Health as the costs were too high.

With a view to exploring the possibilities of a reduction in the cost of houses, a Sub-Committee was appointed (1) to propound a scheme of direct labour for the erection of a limited number of houses, with a view to securing reliable information and data as to the actual constructional cost of houses under present conditions; (2) to urge upon the Board of Health the adoption of a number of standard types of houses, in order that a system of standardisation of types of houses might be introduced with a view to effecting economy; and (3) to inspect a specimen house which had been recently erected at Cathcart by Lord Weir's method of steel construction.

The Sub-Committee afterwards agreed that a trial should be given to the erection of 40 dwellings by direct labour at Carfin, in order to ascertain precisely the cost involved. When the tender of the Works Department was received, it was found that the cost per house was £45 19s. 4d. in excess of the contractors' prices, and it was agreed that, before taking any further steps, the views of the Board of Health should be obtained on the offer which had been submitted by the Works Department.

SEASONAL WORKERS.—Three contraventions of the Local Authority's By-laws for Seasonal Workers were reported to the Committee—(1) John Gemmell, East Mains, Stonehouse; and (2) John Hamilton, Low Kittymuir, Stonehouse, in respect that they had accommodated workers at their farms without giving intimation to the Local Authority, and in premises which were entirely unsuitable; also (3) William Grant, Potato Merchant, Hamilton, in respect that, as employer of the workers, he failed to give timeous intimation to the Local Authority as to the number of workers to be employed, and the

dates of their arrivals at the farms. The Committee agreed to prosecute the several offenders. In the first two cases Defenders pled guilty and were each fined £3. In the third case the Procurator-Fiscal had difficulty in taking proceedings owing to the phraseology of the Act, and this case was dropped.

RENT AND MORTGAGE INTEREST (RESTRICTIONS) ACT, 1920 AND 1923.—92 applications for certificates were received during the year, one of which was not dealt with as the name and address of the applicant given could not be traced. In every instance a careful inspection of the premises was made, and a report submitted for the consideration of the Committee. The certificates granted by the Committee numbered 85, including the applications continued from the previous year; 11 were refused; and 2 were under consideration at the close of the year.

Intimation was sent to the owner of each dwelling giving details of the defects found, and in many instances repairs were immediately executed.

The following table shows the number of certificates granted since the commencement of the Act and the cases in which repairs were executed :—

Parish.			Number of Certificates Granted.	Houses in which Repairs have been Executed.	Number still being dealt with
Avondale,	...	...	8	8	—
East Kilbride,	...	...	7	6	1
Glasford,	...	...	3	3	—
Stonehouse,	...	...	13	12	1
Blantyre,	...	...	213	176	37
Bothwell,	...	...	316	232	84
Cambuslang,	...	...	155	124	31
Cambusnethan,	...	...	36	27	9
Dalserf,	...	...	271	244	27
Dalziel,	...	...	1	1	—
Hamilton,	...	...	39	28	11
New Monkland,	...	...	65	50	15
Old Monkland,	...	...	508	426	82
Shotts,	...	...	263	229	34
Total,			1,898	1,566	332

Applications by Landlords. — Twenty applications were received from owners of houses in respect of which certificates had previously been granted to the tenants, requesting reports of the Local Authority to the effect that the houses were now in a reasonable state of repair. The Committee granted certificates in 12 instances, 7 were refused, and 1 was under consideration at the close of the year.

Ruinous Buildings.

The following ruinous or dangerous buildings were dealt with during the year, in terms of Section 191 of the Burgh Police (Scotland) Act, 1892, as applied to the County by Section 10 (2) of the Local Government (Scotland) Act, 1908 :—

Blantyre. — The property at 43 Auchinraith Road, Blantyre, referred to on page 174 of last Annual Report, is still unoccupied. During the year further mineral operations rendered the front wall dangerous, and the matter was again taken up with the Agents for the Bondholders. No satisfactory progress had been made at the close of the year.

Newarthill.—The gable wall and part of the thatch roof near the unoccupied house, No. 139 High Street, Newarthill, referred to in last Annual report, page 174, was found in a dangerous condition. A notice was served on the owners, but nothing, so far, has been done.

Larkhall.—A brick building, formerly comprising three dwelling-houses, situated at the rear of 68 London Street, Larkhall, was found to be in a ruinous and dangerous condition. After service of a notice on the agent for the proprietor, the ruins were taken down, and there is now no cause for complaint.

Cleland.—The two-storey building at 86-90 Omoa Road, Cleland, referred to in last Annual Report, page 175, was again the subject of official action, due to the ruinous and dangerous state of the structure. The matter was being dealt with at the close of the year.

Drainage.

There are still 24 Special Drainage Districts in the Middle Ward Area, no new districts having been formed during the period under review.

New Sewers.—The following information has been supplied by the District Engineer as to sewers constructed during the year:—

SPECIAL DRAINAGE DISTRICTS.

					Lineal Yards.			
					9"	12"	18"	24"
Bellshill and Mossend,	-	-	-	-	120	263	—	—
Cambuslang,	-	-	-	-	180	106	—	—
East Kilbride,	-	-	-	-	345	—	—	—
Larkhall,	-	-	-	-	400	—	—	—
Mount Vernon,	-	-	-	-	200	—	153	273
Shotts and Dykehead,	-	-	-	-	450	—	—	—
<i>Public Health, General—</i>								
Edinburgh Road, Uddingston,	-	-	-	-	—	—	516	—
Glassford,	-	-	-	-	—	117	—	—
Salsburgh,	-	-	-	-	223	—	—	—
Totals,	-	-	-	-	1,918	486	669	273

The number of connections made to sewers was 92.

SEWAGE PURIFICATION WORKS.

Glassford.—A sewage tank was constructed at Glassford, and an irrigation meadow provided for treatment of the tank effluent.

Salsburgh.—A sewage tank was constructed at Salsburgh.

HOUSING SCHEMES.

Wellshot, Cambuslang,	-	-	-	239 yards,	9-inch pipe.
Bonkle, Newmains,	-	-	-	321	„ 9 „ „
Hillhouseridge Road, Shotts,	-	-	-	140	„ 9 „ „
Torbothie, Shotts,	-	-	-	452	„ 9 „ „
Do. do.,	-	-	-	509	„ 12 „ „
Caldercruix,	-	-	-	313	„ 9 „ „
Do.,	-	-	-	218	„ 12 „ „
Do.,	-	-	-	26	„ 15 „ „

Bothwellpark Rows.—A petition, signed by a large number of the inhabitants of Bothwellpark Rows, asking for the provision of sewerage facilities for these rows, was received early in the year. Consideration of the matter was, however, deferred, as the subject formed part of the larger question of Drainage Areas outwith Special Drainage Districts, presently receiving attention.

Overtown.—The discharge of crude sewage from the Overtown Housing Scheme into a ditch, referred to on page 178 of last Annual Report, and the proposed acquisition of land for the erection of a tank and the formation of an irrigation meadow, were the subject of much discussion and correspondence with the Superior's factor. The Superior objected to the sewage being treated by irrigation, and the Committee afterwards agreed to provide a filter. It was also agreed to proceed with a complete scheme of sewers, &c., for the other portion of the village of Overtown, as a work for the relief of unemployment.

Ashgillhead.—Reference was made on page 179 of last Annual Report to the pollution of the Stewart Gill Burn by crude sewage from the Ashgillhead Housing Scheme, and to the temporary fencing of a portion of the burn and the provision of a gravitation water supply to adjacent fields. Towards the close of the year, complaint was made by a riparian owner farther down that the burn flowing through his lands was so polluted that he had been deprived of a water supply for the grazing of his cattle and other purposes. The matter was remitted to a Sub-Committee.

Chapelton.—With regard to the drainage arrangements for Chapelton School and Village, it was suggested that a consultation between the Education Authority and the Local Authority might be held, with a view to obviating overlapping in any schemes which might ultimately be agreed to.

Glasford.—The necessary land required for irrigation purposes, referred to on page 176 of last Annual Report, having been acquired, the modified scheme necessary to implement the agreement with the Education Authority was carried through.

* *Greengairs.*—With regard to the pollution of the Cameron Burn and the urgent need for suitable drainage arrangements being provided for the village of Greengairs, the District Engineer submitted his report on the cost of providing a sewerage system and purification works, with an estimate of the annual expenditure, which showed that it would be necessary to impose a rate of 12s. 2·4d. per £. Consideration of the matter was continued.

Salsburgh.—A complaint made by the tenant of Langside Farm as to the pollution of the Shotts Burn by the discharge of crude sewage from the Housing Scheme, referred to on page 178 of last Annual Report, was disposed of by the introduction of a gravitation water supply to the farm steading and certain fields, but complaint was afterwards made by the owners of Longacre Farm. Tenders were

taken for the construction of an outfall sewer and tank, but there was some delay in getting the work commenced, owing to the attitude of the owners of Longacre, in the matter of wayleave, who made complaint to the Scottish Board of Health with regard to the pollution of the burn. The statutory notice was served, stating the intention of the Committee to lay the sewer, &c., and, a later meeting with the owners proving futile, instructions were given to proceed in accordance with the provisions of the notice and statute.

Stonehouse.—The tenant of Hamilton Farm, Stonehouse, made a claim for the loss of a horse and damage to his cattle, through drinking water from a ditch alleged to be polluted by sewage and liquids from Stonehouse Gasworks. The Committee agreed to deny all liability, but evidence was afterwards submitted as to the pollution of the ditch by liquids from the Gasworks, and a settlement was made with the farm tenant.

A petition was received from certain ratepayers in Stonehouse, intimating that a nuisance was being caused by the discharge of sewage on a field near their dwellings. The Medical Officer of Health and District Engineer reported that no nuisance existed at the place, and that the system of irrigation in operation was the approved method of irrigation of sewage over land, and the complainers were informed accordingly. A letter was subsequently received from a firm of law agents, stating that they had been consulted in the matter, and suggesting that, failing the Local Authority deciding to remove the cause of complaint, some meeting might be arranged, when the matter could be amicably discussed, in the hope of some settlement being made. A complaint was also received from the owners of Candermill, stating that the sewage caused the Cander Stream to be unsuitable for stock to drink, and in summer-time stagnant pools at the mill caused a disagreeable stench. A Sub-Committee was appointed, and, after visiting the *locus*, they reported that the irrigation system was working satisfactorily, and that no nuisance was being created. They also examined the Cander Water and the effluent being discharged into it, and were satisfied that there was no cause for any objection and no call for any compensation being paid.

FACILITIES FOR AREAS OUTWITH SPECIAL DISTRICTS.—The question of the provision of drainage facilities for areas outwith existing Special Drainage Districts, referred to on page 176 of last Annual Report, was again under consideration, and the District Engineer submitted further estimates of the cost of drainage schemes for certain selected areas. It was agreed that Parliamentary powers should be

sought to deal with the question, under a scheme for limiting the drainage rate to a certain amount, the balance to be found from the imposition of a general rate over the whole Middle Ward District.

Water Supply.

The water supply from the various reservoirs belonging to the Middle Ward District Committee was more than sufficient to meet all demands. Complaints were received as to local deficiencies, but these were mostly found to be due to deficient service pipes, and, on being brought to the notice of the respective owners, were remedied in every instance.

The following is a note, prepared by the Water Engineer, showing the extensions of water pipes carried out during the year:—

				Lineal Yards.			
				2"	3"	4"	5"
Dunsyston Row, Gartness, -	-	-	500	—	—	—	—
Brankston House, Stonehouse, -	-	-	1,100	—	—	—	—
Quarter to Darngaber Tileworks and							
Crookedstanes Farm, -	-	-	1,200	—	—	—	—
Coltness Housing, Allanton, -	-	-	—	350	—	—	—
Langside Farm, Salsburgh, -	-	-	—	670	—	—	—
Torbothie Housing, County, -	-	-	—	500	—	—	—
Do. do., Shotts Iron Company,			—	150	—	—	—
Hawthorn Walk, Cambuslang, -	-	-	—	100	—	—	—
Bonkle Housing, -	-	-	—	130	—	—	—
Westeraigs and Southrigg to Northrigg,			—	2,500	800	2,000	—
Broomelton Farm, Larkhall, -	-	-	—	700	—	—	—
Limekilnburn to Quarter Station, -	-	-	—	—	—	970	—
Quarter Station to Cottage, -	-	-	—	—	1,300	—	—
Pipe Branch to Carscallan Farm, -	-	-	—	1,000	—	—	—
Do. do., South Quarter, -	-	-	—	1,300	—	—	—
South Quarter to Little Sunnyside, -	-	-	—	1,400	—	—	—
Drumgrew Bridge to Twechar, -	-	-	—	3,650	1,420	—	—
Totals, -	-	-	2,800	12,450	3,520	2,970	—

Blackwoodyett to Birkenshaw, 1,760 yards 12" pipes and 7,040 yards 15" pipes.

Water Samples.—Owing to complaints made regarding the quality of water supplies from private and public sources, samples were obtained from the following places and submitted for chemical analysis:—Forrestfield; Craighbank Farm, Larkhall; Graynes Farm. Strathaven; Headhouse Farm, East Kilbride; and Blairmuckhill, Shotts.

Forrestfield.—A petition was received from householders in the village of Forrestfield, Shotts Parish, making application for an adequate water supply. The existing water supplies comprised three water spouts, which invariably went dry after a drought, and a spring, situated about 300 yards from the village, which also failed in a very dry season. Certain extensions of piping in the neighbourhood were under consideration of the Water Committee at that time, and it was found possible to extend a 3-inch water pipe to the village.

Graynes Farm, Strathaven.—Samples of water taken at this farm were all found on analysis to be unsatisfactory. The Medical Officer of Health inspected the various sources of supply, and the whole question was under consideration at the close of the year.

Headhouse Farm, East Kilbride.—As the result of a complaint, samples of water were taken at this farm, and these proved to be unsatisfactory. The tank and filter were cleaned out, and there is now no cause for complaint.

Craigbank Farm, Larkhall.—Complaint was made as to the water supply at this farm. Samples were obtained, which on analysis showed that the water was polluted to such an extent as to render it unfit for domestic and dairy purposes. The matter was taken up with the proprietor, and is still under consideration.

Blairmuckhill, Shotts.—Samples of steam-tap water, used by the occupants of two dwellings at Blairmuckhill Colliery, were found to be unsuitable for potable purposes. Further samples were taken from other available supplies, but these were also found to be unsatisfactory, on account of their hardness and solid contents. The matter is under consideration.

Scavenging.

There are now 25 Special Scavenging Districts within the Middle Ward Area, three new districts having been formed during the year to include Aitkenhead, Tannochside, and Bothwellpark; Calderbank; and Busby.

AITKENHEAD, TANNOCHSIDE, AND BOTHWELLPARK. — This Special Scavenging District, referred to on page 187 of last Annual Report, was formed on 25th January, and the work of scavenging, which is undertaken by a contractor, commenced on 15th May. The work was carried out during the year in a satisfactory manner, and numerous ashpits were abolished and dustbins provided. Despite the frequency with which the ashpits at Bothwellpark were scavenged, no great

improvement in the conditions there was noted. The refuse is collected twice weekly, and deposited in Bell's Quarry, Fallside.

BAILLIESTON.—The daily collection and removal of refuse within this Special District continues to be carried out satisfactorily by a staff employed by the Local Authority. The dry refuse is deposited in a coup, and the wet ashpit matter used for farm purposes. The procedure adopted for emptying the ashpits in West Marystone during the winter months is proving satisfactory, the work being carried out by a local contractor.

Common Stairs, &c. — Notices in terms of Section 117 of the Burgh Police (Scotland) Act, 1892, were served on eleven proprietors, requiring them to whitewash or, at their option, to paint the walls and roofs of the common passages and staircases at their properties. In every instance but one the necessary work was duly executed. The owner of the property at 35-37 Maxwell Street, Baillieston, failed to comply with the requirements of the notice served on him, and Court proceedings were instituted. The respondent was fined ten shillings, and the work was afterwards carried out. Three notices were also served on occupiers, in terms of Section 115 of the Burgh Police Act, 1892, determining the rotation to be observed in sweeping and washing the common stairs and landings giving access to their dwellings and intimating that, in the event of their failing to comply with these requirements, proceedings would be taken against them. Sweeping and washing have since received attention, and proceedings have so far been unnecessary.

BELLSHILL AND MOSSEND.—The refuse in this Special District is collected and removed daily to a coup, under the direct control of the local Sub-Committee of Management, who have a superintendent and staff in their own employment.

Common Stairs, &c.—Thirty-nine notices were served, requiring the whitewashing or painting of common passages and staircases, and in every case the work was duly carried out.

BLANTYRE. — The collection and removal of refuse is still being carried out by a contractor, under the control of the local Sub-Committee of Management, and supervised by their superintendent. The work has been done in a satisfactory manner. The refuse is disposed of at Blantyre Destructor.

In connection with the proposed purchase by the Parish Council of the land lying between John Street and Station Road, and presently used as a public park, it was suggested that the low-lying

portion of this land might be made up to a higher level by the tipping of household refuse, and that, if such an arrangement could be carried through, Blantyre Refuse Destructor might be shut down and a considerable saving effected.

Common Stairs, &c.—Notices were served on the owners of forty-five properties requiring the whitewashing or painting of common passages and staircases, and in every case the work was duly executed.

Backcourts. — The usual trouble was experienced due to miry conditions and the dirty habits of many of the tenants. No lasting improvement can be expected until backcourts are properly paved and drained.

BOTHWELL.—The daily collection and removal of refuse continues to be carried out by the staff employed within this special district in a satisfactory manner, the refuse being disposed of at Fallside Coup.

In view of the increase in the amount of the refuse collected, due to the inclusion within the boundaries of the special district of the housing scheme, the Committee decided to employ a contractor three times weekly during the winter months to collect and remove the contents of the dustbins at the housing scheme.

BUSBY.—A requisition having been received, signed by not fewer than ten Parish electors of the Parish of East Kilbride, calling upon the District Committee to consider the propriety of forming the Village of Busby into a Special Scavenging District, a report was submitted to the Committee, on 8th February, giving details of the number of dwellings, water-closets, and ashpits, and showing that a rate of 6·3d. per £ would be required to meet the annual expenditure. The Committee agreed that a Special Scavenging District be formed, and the work of scavenging commenced on 15th May. The refuse from ashbins is collected twice weekly by a contractor, and the contents of ashpits removed at least once a month and deposited in a coup.

CALDERBANK.—This Special Scavenging District, referred to on page 187 of last Annual Report, was formed on 25th January, and the work of scavenging, which is undertaken by a contractor, was commenced on 15th May. The dry refuse is collected twice weekly, and the contents of privy-middens removed at least once monthly to a coup.

Common Stairs, &c.—Two notices were served requiring the whitewashing of common passages and staircases, and in both cases the requirements were carried out.

CAMBUSLANG.—The collection and removal of refuse in this special district is undertaken by a contractor, and was carried out in a satisfactory manner. The refuse is disposed of at Cambuslang Destructor.

Common Stairs, &c. — Notices, in terms of Section 117 of the Burgh Police Act, were served in seventy-two cases requiring the white-washing of common passages and staircases, and the work was duly carried out in every instance. Two notices, in terms of Section 115 of the same Act, were served on occupiers, determining the weekly rotation to be observed in sweeping and washing common stairs and landings giving access to their dwellings, and the requirements have since been complied with.

CARMYLE AND MOUNT VERNON. — The collection and removal of refuse in this special district continues to be done in a satisfactory manner by a staff employed by the Local Authority. The refuse is partly disposed of in coups and the remainder on farm lands.

Common Stairs, &c. — Seven notices were served on owners of property who had failed to whitewash or paint the walls and roofs of common passages and staircases. The necessary work was duly carried out.

CLELAND AND OMOA.—The refuse in this special district is removed by a contractor and disposed of on farm lands.

DALZELL AND NETHERTON.—The work of scavenging in this special district continues to be done by the staff in a satisfactory manner, the refuse being collected daily and deposited in coups. Part of the time of the staff is devoted to the special district known as Hamilton Road.

EAST KILBRIDE.—The scavenging of this area is carried out satisfactorily by a contractor, and the refuse deposited in a coup.

Common Stairs, &c.—A notice was served on an owner of property requiring him to whitewash or, at his option, to paint the walls and roofs of a common passage and staircase, and the work was duly carried out.

GARTLEA.—The work in this special district continues to be carried out by the contractor in a satisfactory manner, the refuse being collected and removed weekly to a coup.

GLENGOWAN AND CALDERCRUIX. — The scavenging of this special district is carried out satisfactorily by a contractor, and the refuse disposed of on farm lands.

HAMILTON ROAD.—The refuse in this special district is removed daily by the staff employed by the Dalzell and Netherton District, and the work is carried out satisfactorily.

HOLYTOWN, &c.—The daily collection and removal of refuse in this special district continues to be done by the staff in a satisfactory manner, the refuse being disposed of at New Stevenston Destructor. The ashpit refuse from Legbrannock is collected weekly by a contractor and disposed of on farm lands.

Common Stairs, &c.—A notice, in terms of Section 117 of the Burgh Police Act, was served on an owner of property, and white-washing was duly carried out.

LARKHALL.—The daily collection and removal of refuse in this special district is undertaken by a staff in the direct employment of the Committee, the refuse being incinerated in Larkhall Destructor. There are still a small number of privy-middens within the district, and the refuse from these is disposed of on farm lands or in coups.

Common Stairs, &c.—Six notices were served on owners of property who had failed to whitewash or paint the walls and roofs of common passages and staircases. The necessary work was duly carried out.

NEWARTHILL.—The collection and removal of refuse within this special district is carried out satisfactorily by a contractor, the refuse being disposed of on farm lands. The contents of ashpits are removed once, and ashbins thrice, weekly.

NEWMAINS.—The collection and removal of refuse in this special district is undertaken daily by a contractor, and the material deposited in coups. The work is carried out satisfactorily, the collection being completed before midday, as stipulated.

SALSBURGH.—The weekly collection by a contractor of the refuse in this special district is carried out in a satisfactory manner, the refuse being disposed of on farm lands.

SHOTTS AND DYKEHEAD.—The removal of refuse in this special district continues to be carried out by the staff in the direct employment of the Committee in a satisfactory manner, the material being disposed of on farm lands and in coups. It is gratifying to record the continued diminution in the number of privy-middens, no fewer than 92 of these receptacles having been abolished during the year, making a total of 400 swept away since the formation of the special district.

STONEHOUSE.—The scavenging of this special district is carried out by a contractor, the refuse from ashbins being collected twice weekly, and the contents of ashpits removed at least monthly. All refuse is deposited in a coup.

STRATHAVEN.—The daily collection and removal of refuse in this special district is undertaken by a contractor, and the work carried out satisfactorily. The refuse is deposited in a coup.

Common Stairs, &c.—Notices, in terms of Section 115 of the Burgh Police Act, 1892, were served on two occupiers. Sweeping and washing have since been regularly attended to.

UDDINGSTON.—The daily collection and removal of refuse within this special district is carried out by a contractor, and all refuse deposited in Fallside Coup.

WATERLOO AND OVERTOWN.—The scavenging of this special district is carried out by a contractor in a satisfactory manner, the refuse from ashbins being collected twice weekly, and the contents of ashpits removed at least twice monthly to farm lands and coups.

HARTHILL, &c. — The question of scavenging facilities for the village of Harthill was under consideration, and a report was submitted to the Committee, on 7th November, showing that there were 467 houses in the proposed area, 126 of these having water-closets and dustbins, 227 having water-closets and dry ashpits, and 114 having privy-middens. The estimated cost of scavenging was about £357, necessitating a rate of 11·27d. per £. The matter was continued for further consideration.

HOUSING SCHEMES. — The collection and removal of refuse twice weekly from the dwellings at the following housing schemes, which are still outwith Special Scavenging Districts, is carried out by contractors under the supervision of the local Sanitary Inspectors, viz. :—Ashgill, Broomhouse, Carnbroe, Chapelhall, Eastfield, Greengairs, Meikle Earnock, and Westcraigs.

PROVISION OF DUSTBINS.—During the year notices, in terms of Section 23 of the Burgh Police (Scotland) Act, 1903, were served on certain owners of property within the various Special Scavenging Districts, requiring them to provide proper covered receptacles. In most cases suitable dustbins were provided after service of the notices, and the remainder were reported to the Committee with a view to proceedings, in terms of Section 24 of the Act, being instituted.

Legal proceedings were found necessary in three cases, and all were successful, viz. :—10 Miller Street, Larkhall; 22-30 and 59-69 Clova Terrace, Uddingston; and 28 Milton Place, Larkhall. In the latter case the respondent asked the Court for a stated case, but subsequently withdrew.

WATER-CLOSETS.—The following statement shows the number of privies which existed in Special Scavenging Districts prior to the formation of same, also the number since abolished, and water-closet accommodation provided in lieu :—

District.	Privies.	Abolished.	District.	Privies.	Abolished.
Aitkenhead, &c.,	87	21	Hamilton Road,	—	—
Baillieston, -	145	99	Holytown, &c., -	185	157
Bellshill, &c., -	382	375	Larkhall, -	868	833
Blantyre, -	251	251	Newarthill, -	112	19
Bothwell, -	100	96	Newmains, -	246	246
Busby, -	—	—	Salsburgh, -	56	15
Calderbank, -	75	—	Shotts, &c., -	717	400
Cambuslang, -	212	212	Stonehouse, -	180	64
Carmyle, &c., -	50	36	Strathaven, -	460	460
Cleland, &c., -	260	91	Uddingston, -	102	102
Dalzell, &c., -	30	22	Waterloo, &c., -	169	2
East Kilbride, -	34	34			
Gartlea, -	4	2	Total, -	4,817	3,537
Glengowan, &c.,	92	—			

Private Streets.

BLANTYRE. — *Victoria Street*, referred to on page 189 of last Annual Report. Certain of the feuars in the upper portion of the street having refused to make any contribution towards the cost of putting the roadway in repair, notices were served under Section 39 of the Public Health Act. No steps having been taken by the owners to give effect to the notice, the Committee agreed that the necessary works be carried out and the expense thereafter recovered from the owners in terms of the Statute.

Herbertson Street. — The unsatisfactory nature of the repairs executed on this street was referred to on page 188 of last Annual Report. Nothing further was done by the owners to carry out the additional repairs necessary.

Forrest Street. — Referred to on page 188 of last Annual Report. The work of repair was completed, and the Committee proceeded to recover the costs incurred. The District Engineer reported later that the street was getting into an unsatisfactory condition, as, with one or two exceptions, it was not receiving periodic attention by the feuars. The Clerk was instructed to address a communication to the

feuars pointing out that they were still liable for the condition of the road, and that they should arrange for it receiving proper attention. Certain of the feuars afterwards raised the question of the roadway being taken over as a public highway, and the Committee agreed that if certain further works were carried out the request would receive favourable consideration.

CAMBUSLANG.—*Glen Street*, referred to on page 189 of last Annual Report. The arrangement for making up this private street to the highway standard was successfully completed, and the street has since been added to the List of Highways.

Castle Chimins Road.—Referred to on page 190 of last Annual Report. Negotiations for the repairs necessary on this street were still proceeding.

LARKHALL.—*Victoria Street* and *Academy Street*, referred to on page 190 of last Annual Report. The negotiations with the feuars for the repair of these private streets having proved fruitless, notices were served under Section 39 of the Public Health Act.

Claude Street.—Referred to on page 190 of last Annual Report. Negotiations for the making up of this street were still in progress.

TOLLCROSS.—In connection with the unsatisfactory condition of Fullarton Avenue, referred to on page 190 of last Annual Report, negotiations were still in progress for making up this street as a highway.

BAILLIESTON.—The unsatisfactory condition of Longlea Street, Baillieston, was referred to in Committee, and the Medical Officer of Health was asked to report. An inspection was made, but the conditions found were not such that the street could be dealt with under Section 39 of the Public Health Act.

SHOTTS.—*Clive Street*, *King Street*, and *Easter Road*. Reference was made on page 190 of last Annual Report that these streets require to be levelled, macadamised, paved, and channelled, and made good in terms of Section 39 of the Public Health Act. A note of the total expense and the amount payable by the respective feuars was sent to each feuar, after which a meeting was held with them and the whole position discussed. No agreement could be arrived at, and notices under Section 39 of the Public Health Act were served towards the close of the year.

Gasworks Road.—Attention was directed to the condition of this private road, and, after negotiations, the necessary repairs were carried out.

Nithsdale Street.—The insanitary condition of this street, which forms one of the accesses to the housing scheme, was reported to the Committee, and arrangements were made for such repairs being executed as would permit of the street being taken over as a highway.

Nuisances.

During the year 81,249 inspections were made for the detection of nuisances, and the number of nuisances recorded was 3,708, the chief being choked drains, sinks, and water-closets.

2,538 intimations were issued to authors of nuisances, and in many instances the cause of complaint was immediately removed. Where the intimations had no attention statutory notices were served, and these numbered 281.

Legal proceedings were taken in four instances, and in every case were successful. They might be briefly summarised thus:—

Breadalbane Place, Longriggend—leaky ashpit.

228 Station Road, Shotts—dilapidated water-closet.

Low Shawsburn, Dalserf—dilapidated and foul ashpits.

Boghall Square, Broomhouse—foul and miry backcourt.

Unfenced Shafts.—Ten disused mine shafts were found to be in a dangerous condition, and dealt with by the Department. These were situated as follows:—Ryden Mains, New Monkland; Calderrigg, Airdrie; Mochriesinch No. 2, Greengairs; Whiterigg No. 1, New Monkland; Newarthill; Cairnhill, Airdrie; Belhaven, Wishaw; Shawsburn, Larkhall; Easterrigg No. 2, Gartcosh; and Greengairs.

Carfin Grotto.—In connection with the inadequate water-closet accommodation, referred to in last Annual Report, page 191, a new institute was built during the year, and in it sufficient water-closet accommodation was provided. No further complaint in this connection has since been received.

Colliery Bings.—Complaints having been received with regard to fumes from the burning bings of colliery refuse at Viewpark Colliery, near Uddingston, and Milnwood Colliery, Mossend, the Committee were informed that these bings had been under the observation of the Department for some considerable time, and that certain alterations in the methods of tipping had been suggested to the Companies concerned, which, it was thought, would obviate complaints meantime.

Piggery, North Road, Bellshill.—Complaint having been made as to nuisance conditions arising from a large piggery in North Road, Bellshill, it was explained to the Committee that sanction to erect

this piggery was granted in 1918, at a time when a relaxation of the By-laws was permitted as a war-time measure for increasing the food production of the country, and that the intention at that time was that these buildings would not be disturbed for a period of five years, but that, while the erection of a piggery might be very desirable in 1918, its continuance could not now be justified. The owners, when interviewed, agreed to give up pig-keeping, but asked that they should be allowed a period of six months in which to dispose of their stock, as they had a number of young animals which could not presently be disposed of without serious financial loss. The Committee agreed that a period of four months be allowed, and the pigs have since been disposed of.

Coalhall, New Stevenston.—Complaint was made by the factor for Dalzell Estate as to the discharge of sewage from certain dwellings into a ditch on the estate, and he inquired whether the Local Authority could do anything to deal with this sewage and prevent it flowing over the land. Reports were submitted to the Committee that the dwellings were not included in any Special Drainage District, that a sewer could only be provided at considerable expense, that the ditches had all recently been cleaned out, and that, meantime, there was nothing at the place which would warrant action under the Public Health Act. It was agreed to take no further action in the matter.

Chimneys on Fire.—A complaint was received from Cambuslang with regard to nuisance conditions caused by chimneys on fire, but the Committee agreed that they could take no action. Powers should be sought at the first opportunity to have the provisions of Sections 289 and 290 of the Burgh Police (Scotland) Act, 1892, made applicable to the populous places in the Middle Ward Area, so that the conditions complained of might be properly dealt with.

Ferniegair.—A resolution having been passed at a public meeting calling attention to the present unsatisfactory conditions in the Ferniegair and Ross Districts, the matter was remitted to a Sub-Committee for inquiry and report. The Sub-Committee afterwards visited the locality, along with the Medical Officer of Health and the District Sanitary Inspector, and were shown round the various properties, and the steps which had been taken from time to time with a view to improving the sanitary conditions were explained, as also the difficulties which had been experienced through the want of a proper drainage outlet. The Sub-Committee were satisfied that everything possible was being done by the Department under the present circumstances.

ASPHALT PLANTS.—(1) *Hollandhurst, Gartgill*. A complaint was received as to nuisance conditions arising from dust and fumes from an asphalt mixing plant at Hollandhurst, Gartgill. Various measures were taken by the contractors to mitigate the complaint, but, these proving futile, it was found necessary to remove the occupants of the adjoining dwelling and find them other accommodation meantime.

(2) *Bellshill*.—The District Committee were in course of installing a similar asphalt plant at Bellshill Old Gasworks, and the attention of the Road Surveyor was directed to the need for special precautions being taken to avoid trouble. Shortly after the plant was in operation, letters were received from the tenants of dwellings in the North Road Housing Scheme, which is immediately adjoining, complaining of the nuisance caused by dust and fumes from the plant. The Road Surveyor is still experimenting, but, so far, no effectual method of preventing the nuisance has been found, and it may be necessary to ask for the plant to be removed to some other site.

Cinemas.

All the cinemas within the district were regularly inspected during the year, and in every instance it was observed that a good standard of cleanliness was being maintained. In several cases, however, the attention of the management was directed to window blinds being drawn during the day when no performance was on, and to the need for flooding such places of amusement with as much sunshine as our climate will permit.

Workshops.

The number on the register at the beginning of the year was 381. Since then 15 have been added thereto, and 48 removed therefrom, leaving 348 at the close of the year.

During the year three notices were received from H.M. Inspector of Factories of persons beginning to occupy workshops. The premises were duly inspected, measured, and the occupiers supplied with cards showing the capacity of each room and the number of employees permissible.

The inspections made numbered 631, and five notices were received from the Inspector of Factories regarding insanitary conditions in workshops. The various matters complained of were taken up and dealt with by the Sanitary Staff. These related to three dirty bake-houses, a leaky bakehouse roof, and a workshop without suitable sanitary accommodation for female employees. The Department also

dealt with six dirty bakehouses, one dilapidated ceiling, one defective lighting and ventilation, and one dirty walls and ceiling reported by the Sanitary Officers. A wooden one-storey building at Carmyle was found to be used as a bakehouse, and, as the premises were entirely unsuitable, the matter was taken up with the owner, who immediately discontinued the use of same for such purposes.

Four lists, containing seven outworkers, under Section 107 of the Factory and Workshop Act, were received from the City of Glasgow Authority. Inspections were made of all the premises, and these were found in a satisfactory condition.

The following table gives the handicrafts carried on in the various workshops :—

HANDICRAFTS.

Dressmaker, - - -	34	Watchmaker, - - -	6
Tailor, - - -	74	Plumber, - - -	14
Milliner, - - -	12	Tinsmith, - - -	1
Baker, - - -	77	Photographer, - - -	1
Shoemaker, - - -	50	Cycle Repairer, - - -	2
Saddler, - - -	7	Motor Repairer, - - -	7
Blacksmith, - - -	20	Hosier, - - -	6
Joiner, - - -	20	Coachbuilder, - - -	2
Cabinetmaker, - - -	5	Ragpicker, - - -	1
Silk Weaver, - - -	6	Confectioner, - - -	1
Laundry, - - -	1	Underclothing, - - -	1

Public Schools.

The various public schools throughout the district were inspected during the year, and certain matters requiring attention were brought to the notice of the Education Authority.

Calder Road Public School, Mossend, is being reconstructed and enlarged, as the old school was found to be out-of-date and overcrowded. The overcrowded condition of the R.C. School, Mossend, was noted, as also the overcrowded and insanitary condition of St. John's R.C. School, Uddingston. In the latter case, that portion known as the "League Hall," where the general structure arrangements and lack of proper and sufficient sanitary conveniences are very marked, calls for urgent attention on the part of the Education Authority.

"*Lascar*" *Water-Closets*.—With regard to the introduction to schools of trough closets (Eastern type), referred to on page 193 of last Annual Report, and the refusal of the Committee to approve of closets of this type for a new school at Longriggend, the Education Authority proceeded to instal the closets. They were immediately

called in question, and a meeting between parties was arranged, after which the Medical Officer of Health reported to the Committee in the following terms:—

“Along with the District Sanitary Inspector, I visited the above school, and met, by arrangement, Dr. Cruikshanks, of the Scottish Education Department. We inspected the sanitary conveniences recently installed, and I beg to report as follows:—

The Buildings Inspector intimated a contravention on 31st ultimo, and in my letter to you of 3rd instant I showed that the Committee's instructions, contained in the minute of the Public Health Committee, of date 12th December last, page 1873 of the printed minutes, had been disregarded.

Inspection of the conveniences showed that they were of the same type as those introduced at Larkhall, where the children require to squat, the basin being below the surface of the ground, instead of having a pedestal basin to sit upon. These have been improved in this respect, that each closet has a flushing rim and a separate flushing cistern with a chain pull, and also in respect that each closet is in a compartment by itself and can be readily cleaned.

It is admitted that children in certain schools do abuse pedestal closets by standing instead of sitting, but I have inspected many primary schools where they are properly used, due to the interest taken in this matter by the teachers. It is common knowledge that, in all places where comon conveniences are used, an attendant is in charge to see that they are properly used, and this applies even to the adult population. There is, therefore, much more need for superintendence in a primary school.

The understanding come to was that, for a period of six months, these closets would be allowed to remain as an experiment, and that they might also be tried in a larger school, such as Harthill Public School, which is at present undergoing reconstruction. It was also agreed that during this period no other school should be fitted with closets other than those of the pedestal type. Dr. Cruikshanks undertook to recommend this proposal to the Education Department.

It should be clearly understood that the District Committee, and not the Education Authority, is the Local Authority for all sanitary matters.”

The Committee, while disapproving of the Education Authority's action, and without prejudice to their position, agreed to delay until they had an opportunity of inspecting the closets. The closets at Longriggend and Harthill were duly inspected, and it was agreed that they should be allowed to remain on trial for a period of six months, and that the Sanitary Inspector should make frequent inspections and report at the end of the experimental period, after which the whole matter would be further considered.

Towards the close of the year a letter was received from the Scottish Board of Health, transmitting copy of a communication which the Board had addressed to the Education Authority, stating that the

Board had been considering the question of the most suitable type of water-closet to be installed in schools, in the light of reports by members of their medical and technical staff, and were prepared to approve the installation of the type known as "Eastern Closet," with individual flushing system, for use in schools.

Tents and Vans.

In the course of the year 387 inspections were made, and all the premises, with the following exceptions, were found in a satisfactory condition :—

Bryce's Showground, Larkhall.—It was found that the Factor of Raploch Estate was letting a portion of vacant ground, known as Bryce's Showground, behind 70-72 London Street, Larkhall, by the night or by the week, as an encamping ground for tinkers. Complaints were received from the neighbouring feuars and tenants as to nuisance conditions caused by the tinkers making use of water-closets and wash-houses belonging to the adjoining dwellings. Communications were addressed to the Factor, asking him to cease letting the ground for such purposes, but without success, and all the occupiers of the caravans were accordingly sent a copy of the Committee's By-laws, and it was pointed out to them that they would require to provide a proper supply of wholesome water and means for suitable disposal of refuse matter. It was hoped, as a result, that the vans might be removed. The whole circumstances were reported to the Committee, who authorised proceedings to be taken failing immediate compliance with the By-laws. Five of the vans thereafter removed from the district, and, the owner of the remaining van having failed to appear in Court in answer to the summons, a warrant was granted for his apprehension. Before the warrant could be executed, however, he cleared out of the district, and no further steps were taken.

Philipshill Common.—A complaint was received as to the condition of Philipshill Common, East Kilbride, caused by tinkers camping there. An inspection of the Common was made, when four caravans were found on the ground. All were in a clean and tidy condition, and no action could be taken under the Public Health Act. It was ascertained that the complainer had certain grazing rights on the Common, and had fenced off the ground about eight years ago, but, at the instance of the Parish Council, had taken the fence down. Since then she had on several occasions given permission to tinkers to camp on the ground for a night or so, choosing those whom she thought were of good behaviour, and obviously expecting the impossible to happen, namely, that the undesirables would not camp on the same ground without permission. The Committee agreed that there were

no circumstances or conditions present which would warrant their interfering in the matter, and that action to prohibit camping at the place rested primarily with the complainer. The ground has since been kept under observation, but no nuisance conditions have been found.

Interments.

The bodies interred at the expense of the Local Authority during the year numbered 16, the deaths being due to various causes. Three of these bodies were unclaimed and 13 claimed, but no "sufficient person" undertook the burial.

In every case where application is made to the Local Authority for the interment of a dead body by relatives or others who allege that they are unable to bear the expense of the burial on account of poverty, it has been the practice of the Department to make careful inquiry into all the circumstances, particularly to ascertain whether the deceased person was insured in any benefit society, and, as a result, the whole or part expense of seven burials was afterwards recovered.

Common Lodging-Houses.

There were three common lodging-houses on the register at the beginning of the year, and all were granted renewal of registration. The number of visits of inspection made was 54, and the premises were all found in a clean condition.

An application was received from an occupier of premises at Castle Street, Strathaven, requesting registration as keeper of a common lodging-house there, but the premises were found to be entirely unsuitable for such purposes, and the Committee decided not to grant the application.

Dairies, Cowsheds, and Milkshops.

The number on the register at the beginning of the year was 1,043. Since then 12 have been added thereto and 22 removed therefrom, leaving a total of 1,033, including 638 producers of milk and 395 retail purveyors of milk, at the close of the year.

1,166 visits of inspection were made by the Sanitary Staff to dairy premises during the year. In 22 instances the premises were reported to be structurally defective, and notices were served on the owners and occupiers to have the defects remedied.

In three instances notices were served on cowkeepers who had failed to keep their premises in a clean condition, and two notices were also served on cowkeepers who had failed to keep their dairy animals properly cleaned and groomed. No further action was found to be necessary in any instance.

The following plans were submitted and approved of during the year for improvements and alterations at dairy premises:—

Castlehill, Dalserf.—New byre.

Westfield, Holytown.—New byre.

Little Kype, Strathaven.—New byre.

South Shields, Glasford.—New byre.

Dalpatrick, Dalserf.—New byre.

Whinrigg, New Monkland.—New byre.

Shirrel, Bellshill.—Addition to byre.

Main Street, Chapelhall.—New churnhouse.

Avonbank Farm, Avondale.—The owner of this farm made complaint that his tenant was still using a wooden byre for the housing of dairy stock. A similar complaint was made last year, and at that time the tenant gave a written promise “that no cows in milk would be kept in the wooden byre, and that the number of milk animals would be restricted to six,” which was the accommodation in the original byre on the steading. The premises were visited from time to time to see that this promise was being observed, but, owing to the restrictions following on the outbreak of foot-and-mouth disease in the neighbourhood, these visits were discontinued. One of the non-milk animals housed in the wooden byre came to the calving, and, owing to the markets being closed, the tenant was unable to dispose of her before she calved and had to retain and milk her at the farm. The whole milk produced at the farm, with the exception of three pints per day, was churned, and, in the circumstances, no proceedings were taken against the tenant.

BLANTYRE.—The walls of the byres at Townhead Farm were found to be in a dilapidated condition due to mineral subsidence, and the premises were considered dangerous. Certain repairs were carried out, and the premises will cease to be used for dairy purposes after May next year.

Townfoot Farm.—A small corrugated-iron byre was erected and used for the housing of dairy animals without the necessary authority. The dairyman was warned, and afterwards the byre was only used for yeld cows and young cattle.

Back Priestfield Farm.—A part of the premises was destroyed by fire, involving the milk store, which was greatly improved on reconstruction.

Greenblairs Farm, Blantyre.—An application was received from the tenant of this farm for registration as a cowkeeper and retail purveyor of milk. The District Sanitary Inspector intimated to the

tenant that he could not recommend the Local Authority to grant registration as the byre and dungstead were not in accordance with the Committee's requirements, the milkhouse walls were rough and holed, the ceiling scaling, the floor was damp, and the window was not sufficiently protected against dust, and that there was no proper provision for the cleansing of milk vessels apart from the boiler used for domestic washing. The circumstances were reported to the Committee, and consideration of the matter was continued in view of the fact that the proprietor had indicated that he was prepared to improve the premises to meet the Committee's requirements.

Low Blantyre Lodge.—A report was submitted that the tenant of Low Blantyre Lodge had commenced business as a retail purveyor of milk without being registered as such by the Local Authority, and was using premises as a dairy without giving one month's notice, in writing, to the Local Authority of his intention so to do; that he had purchased half-a-dozen cows, which were being grazed on the Lodge grounds and milked in the courtyard at the rear of the house; that the milk was then being retailed from a dwelling; and that he had been asked to discontinue the business forthwith and had immediately complied with the request. The Committee agreed to take no further action in the matter.

Stonemyeadow.—A report was submitted that a contravention had been committed by the occupier of Stonemyeadow, in the Parish of Cambuslang, by commencing to occupy premises as cowsheds without making provision, to the satisfaction of the Local Authority, for the lighting, ventilation, cleansing, drainage, and water supply, and without giving one month's notice, in writing, of her intention so to do. At the time of inspection six dairy cows were found in an unfinished wooden shed, while other seven dairy animals were found in another wooden shed. The condition of these buildings was deplorable through dirt, overcrowding, want of ventilation, &c., and intimation was given to the occupier that she must take immediate steps to dispose of the dairy animals and have the buildings cleared away, or provide a proper byre. The Committee agreed to insist on the disposal of the animals or the provision of a proper byre, failing which proceedings were to be taken.

Craighead Home Farm.—The question of insufficient lighting and ventilation of the byre at this farm was taken up with the new occupier and a considerable improvement effected.

BOTHWELL.—The old byre at Thornbank Dairy, Bothwell, was found to be in a bad structural condition as regards lighting, ventilation, &c., and improvements have been arranged for.

Yett Farm, Newarthill.—A five-stalled stable is to be converted, with the sanction of the Local Authority, into a byre for dairy animals, and a new milk-house provided. The work is proceeding.

Westfield Farm, Holytown.—The old byre was pulled down and rebuilt, and the boiler-house removed to a more suitable position.

Dalpatrick Farm, Dalserf.—It was found that the tenant of this farm had committed a contravention by commencing to occupy premises as a cowshed without making provision, to the satisfaction of the Local Authority, for the lighting, ventilation, cleansing, and drainage of the same, and without first giving one month's notice, in writing, of his intention so to do. At the time of inspection, seven milk animals were found in the cowshed. The tenant expressed his regret, by letter, at having contravened the Regulations, and explained that the milk animals found in the cowshed had been held up owing to the foot-and-mouth disease restrictions. He asked that he might be allowed three months to dispose of these animals. In the circumstances, no proceedings were taken.

Glenmarvis.—A report was submitted that business had been commenced as a retail purveyor of milk in premises at Glenmarvis which were quite unsuitable for the purpose, in respect that the milk-house walls were damp, the roof rafters and sarking exposed, want of proper ventilation, roof not provided with rhones and conductors, boiler-house dilapidated and quite unfit to be used in the cleansing of milk vessels. The premises were afterwards put into conformity with the Committee's requirements, and no further action was taken.

MILK AND DAIRIES (AMENDMENT) ACT, 1922.—In view of these contraventions, the Committee agreed that the attention of cowkeepers, dairymen, and purveyors of milk should be directed to the provisions of the Milk and Dairies (Amendment) Act, 1922.

ALTERATIONS ON FARM PREMISES.—A letter was received from the County Clerk, stating that, at a meeting of the Executive Committee, reference was made to the fact that, in connection with his visits to farm premises in which cases of anthrax had occurred, the County Veterinary Inspector had observed that alterations were occasionally being carried out on byres, and on inquiry had found that these alterations were being executed without notification to the District Committee concerned, and that the result was that in some cases the alterations were not made as they would have been had the Local Authority's officials been informed of the intention to do the work, and had an opportunity of advising as to the best method of carrying out same. The Medical Officer of Health informed the Committee that only one case was brought to his notice where repairs were being carried out without intimation to the Local Authority, and that was at once dealt with.

Houses Let in Lodgings.

There are no registered houses let in lodgings within the district, and, in view of the continued scarcity of housing accommodation, it is considered inadvisable meantime to enforce the requirements of the Local Authority's By-laws so far as registration is concerned.

Offensive Trades.

There are 10 private slaughterhouses in the district, situated as follows:—Caldercruix, Chapelhall, Cleland (three), Greengairs, Harthill (two), Longriggend, and Newarthill. In the course of the year regular visits of inspection were made, when, although the structural conditions are not quite satisfactory, the premises were all found in a clean condition.

Public abattoirs in operation belonging to the Local Authority number 7, and these are situated at Baillieston, Blantyre, Bellshill, Larkhall, Shotts, Stonehouse, and Strathaven.

Knackery.—The only other offensive business carried on in the Middle Ward Area is the knackery at Omoa, where the manufacture of manure is also engaged in. The operations continue to be conducted in a satisfactory manner.

Unsound Food.

UNSOUND FOOD.—The inspections made during the year numbered 493, and four seizures were made by the Sanitary Officers, viz.:—42 lbs. fish and 274 lbs. fruit. Particulars as to the inspection of meat are given in the District Meat Inspector's Report, page 289.

Burial Grounds.

BURIAL GROUNDS.—The various burial grounds throughout the district continue to be kept in good order, and the bodies satisfactorily interred.

The new scheme of drainage at High Blantyre Cemetery, referred to in last Annual Report, page 199, was completed during the year, and is proving satisfactory in keeping the lairs dry. No interments took place in the old graveyard belonging to the Heritors.

A number of interments were carried out during the year in the old graveyards at East Kilbride and Stonehouse in a satisfactory manner.

The old burial grounds at Dalserf, Wellgate Street, Larkhall, and Meikle Earnock are kept in a satisfactory manner.

J. MILLAR,

District Sanitary Inspector.

District Offices,
Hamilton, 4th June, 1925.

COUNTY HOSPITAL,
NEAR
MOTHERWELL.

REPORT BY THE PHYSICIAN-SUPERINTENDENT,
JOHN REID, M.D., D.P.H., F.R.F.P.S.

1924

At the beginning of the year 201 cases were in residence, and during the year 1,830 were admitted, making a total of 2,031 under treatment. Of these, 1,684 were discharged well or improved, 148 died, and 199 were in hospital at the end of the year.

SCARLET FEVER admissions were slightly lower than in the previous year. The death-rate is 1·9 per cent. of the discharges, as compared with 2·1 per cent. for last year. Although the type of disease is still mild, several toxic cases were seen.

DIPHTHERIA admissions have remained fairly constant for the last 18 years, with a death-rate round about 10 per cent. These figures are remarkable, and highly unsatisfactory in view of the fact that the cause and cure of the disease have been known for many years. Further, for several years a method of discovering susceptible cases, and of immunising those against the disease, has been discovered. With the exception of a few places, nothing beyond ordinary hygienic practice has been carried out in the country to lessen the incidence of diphtheria.

ENTERIC FEVER is still diminishing, the admissions being the lowest on record. Only one case died. Paratyphoid infection was recognised in three of the cases.

PUERPERAL FEVER incidence remains much the same. The fatality rate is still very high.

Of the MENINGITIS cases notified, 1 was meningococcal, and 5 were due to the pneumococcus. All the true meningitis cases died.

TUBERCULOSIS.—Increasing numbers of lung and meningeal cases were admitted. Although the total number of cases treated has varied little, full use was not made of the beds, due to difficulties in getting unsuitable cases transferred to sanatoria. The first pneumothorax performed in the County was carried out in the hospital. A case of advanced pulmonary tuberculosis and diabetes was treated with insulin.

ENCEPHALITIS LETHARGICA.—The marked increase in this disease, and the difficulties in treating the after-effects at home, is beginning to present a serious hospital problem in regard to finding bed accommodation.

PNEUMONIA.—Throughout the year 46 more cases were admitted than for the previous year, and many requests for removal had to be refused. As the disease is now compulsorily notifiable, the onus of finding hospital accommodation is placed on the Local Authority. When cases are refused admission, due to overcrowding, practitioners are anything but satisfied.

VENEREAL DISEASE.—The figures in this disease are much the same as for the previous year.

RADIOLOGICAL WORK.—253 cases were photographed and reported upon.

The number of admissions from ALL DISEASES was greatest in the month of November. The total admissions for the whole month were 178. During the week ending 17th May, 55 cases were admitted. The greatest number admitted on one day was 17, on 29th September. The average daily number of patients resident was 193·5, the greatest number resident on any one day was 248, on 28th November, and the smallest, 144, on 19th July.

The average duration of residence of all cases discharged was 39·2 days, of all recovered cases, 41·6 days, and of all fatal cases, 12·1 days.

The fatality rate, calculated on all cases discharged, was 8·1 per cent.

The diagnosis of the medical attendant was revised in 293 cases, or 15·9 per cent. of the total discharged.

Request for removal of patients to hospital was made by the medical attendant in 27·2 per cent. of the cases, and by the Public Health Department in 72·7 per cent.

Scarlet Fever.

On 1st January 135 cases were in residence. During the year 878 cases were admitted, of which 77 were wrongly diagnosed. Fourteen cases notified as other diseases proved to be cases of scarlet fever. There were thus 950 actual cases under treatment throughout the year; 818 were discharged well, 16 died, and 116 were in hospital at the end of the year.

REMOVAL TO HOSPITAL was carried out in 91·3 per cent. of the cases in the first week of the disease, 5·6 per cent. in the second week, and 3 per cent. during the third week or later.

THE AVERAGE DURATION OF RESIDENCE of all cases was 50·2 days, of recovered cases, 50·9 days, and of fatal cases, 12·4 days. The

following table indicates the period of residence of the 818 recovered cases :—

Week of Discharge.		No. of days in Residence when Discharged.								No. of Cases in each day.								No. of Cases in each week.
																		7
Under fifth,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	
Fifth, -	-	29	30	31	32	33	34	35	1	2	3	2	7	9	9	33		
Sixth, -	-	36	37	38	39	40	41	42	18	24	26	13	34	49	28	192		
Seventh, -	-	43	44	45	46	47	48	49	78	92	65	13	30	26	15	319		
Eighth, -	-	50	51	52	53	54	55	56	14	15	12	9	14	13	7	84		
Ninth, -	-	57	58	59	60	61	62	63	12	4	10	11	4	8	1	50		
Tenth, -	-	64	65	66	67	68	69	70	6	6	1	4	6	6	1	30		
Over ten weeks, -	-	—	—	—	—	—	—	—	—	—	—	—	—	—	—	103		
Total Number of Cases, - - - - -																	818	

TYPE OF DISEASE.—689, or 82·6 per cent. of the total cases discharged, were classified as mild; 114, or 13·6 per cent., as moderately ill; and 31, or 3·7 per cent., as very severe. In the latter group, 11 were septic and 6 toxic.

THE FATALITY RATE, as calculated on the discharges, was 1·9 per cent. FATAL CASES comprised 9 males and 7 females. The average age was 10·7 years. The youngest was 2 years, and the oldest 38 years of age. The average duration of illness on admission was 3·3 days, and the average duration of residence, 12·4 days. All the fatal cases were of the severe type, 2 were semi-toxic, 3 toxic, and 6 septic. All except 5 developed complications.

CORRECTED DIAGNOSES.—Of the cases notified as scarlet fever 8·7 per cent. were wrongly diagnosed. These were septic joint, 1; burn, 1; chickenpox, 2; diarrhoea, 2; doubtful, 9; erythema, 3; measles, 2; naso-pharyngitis, 1; negative, 37; phimosis, 1; pneumonia, 1; pyelitis, 1; rubella, 4; rhinitis, 2; sore throat, 9; tuberculous meningitis, 1.

COMPLICATIONS.—42·08 per cent. of the discharges had one or more complications.

As in the previous two years some cases were vaccinated with streptococci and staphylococci to determine the effect of this procedure on the incidence of complications. The net result of the experiment with the doses tried was that there is practically no difference in the incidence.

Glands.—155, or 18·5 per cent. of the cases discharged, showed glandular enlargement. In 10 cases suppuration resulted. All degrees of glandular involvement are included.

Ear.—74, or 8·8 per cent., developed otitis media. In 7 instances, or 9·4 per cent. of the otitis media cases, the mastoid region was involved.

Heart.—2 cases had organic disease of the heart, and other 7 developed functional disorders.

Nose.—91, or 10·7 per cent., developed rhinitis.

Joints.—30, or 3·5 per cent., developed varying degrees of arthritis.

Kidney.—29, or 3·4 per cent., had true nephritis, 66 cases mild albuminuria, and 1 bacilluria.

Lungs.—2 cases developed broncho-pneumonia, 1 lobar pneumonia, 1 severe bronchitis, and 1 an infarction of lung.

Eye.—Conjunctivitis, 7; blepharitis, 4; dacryocystitis, 1.

Skin.—Dermatitis, 1; boils, 4; urticaria, 1; erythema, 1; secondary rash, 1; serum rash, 1.

Sepsis.—Paronychia, 20; abscesses, 11; stomatitis, 1.

Other Complications.—Positive swab, 11; convulsions, 1; palatal paralysis, 1; thrombosis, 1; jaundice, 2; meningitis, 1; glycosuria, 1.

Other Conditions present on Admission.—Burn, 1; corneal ulcer, 1; psoriasis, 1; vaginitis, 4; scabies, 1; tinea, 1; Bell's paralysis, 1; panophthalmitis, 1; pityriasis, 1.

The two following tables show the age-periods and week of illness at which the complications occurred:—

AGE.	CERVICAL ADENITIS.		OTITIS MEDIA PURULENTA.			CARDIAC COM- PLICATIONS.		Mastoiditis.	Arthritis.	Nephritis.	Rhinitis.
	Suppurative.	Non- Suppurative.	Left.	Right.	Double.	Organic.	Functional.				
Under 1 Year, -	—	—	—	1	—	—	—	—	—	—	1
-2 " -	1	5	5	1	—	—	—	1	—	—	6
-3 " -	—	12	3	5	1	—	—	—	—	1	17
-4 " -	3	21	6	3	5	—	1	—	—	3	17
-5 " -	2	18	4	6	2	—	—	1	3	2	13
-6 " -	1	6	1	1	2	—	—	—	—	4	8
-7 " -	1	14	3	2	1	—	1	1	2	5	9
-8 " -	1	11	3	—	3	—	1	—	1	3	6
-9 " -	—	11	4	—	—	1	—	2	1	2	6
-10 " -	1	13	—	—	1	—	1	—	—	1	1
-15 " -	—	24	5	4	1	1	—	2	6	5	7
-20 " -	—	4	—	1	—	—	1	—	6	1	—
Over 20 " -	—	6	—	—	—	—	2	—	11	2	—
Total, -	10	145	34	24	16	2	7	7	30	29	91

WEEK OF ILLNESS.	CERVICAL ADENITIS.		OTITIS MEDIA PURULENTA.			CARDIAC COM- PLICATIONS.						
	Suppurative.	Non- Suppurative.	Left.	Right.	Double.	Organic.	Functional.					
First, - -	1	63	5	6	4	1	1	—	18	4	35	
Second, - -	3	30	6	6	7	1	1	—	3	3	12	
Third, - -	2	25	9	6	2	—	—	2	1	11	9	
Fourth, - -	—	21	5	3	3	—	1	2	2	9	14	
Fifth, - -	1	3	—	2	—	—	—	1	5	—	8	
Sixth, - -	2	3	5	—	—	—	2	1	—	1	10	
Seventh, - -	—	—	3	—	—	—	2	1	—	—	1	
Eighth, - -	1	—	1	1	—	—	—	—	—	—	—	
Ninth, - -	—	—	—	—	—	—	—	—	—	—	—	
Over Ninth, -	—	—	—	—	—	—	—	—	1	1	2	
Total, -	10	145	34	24	16	2	7	7	30	29	91	

SERUM.—Diphtheria antitoxin was given in 106 cases. 99 recovered cases had on an average 5,200 units, and 7 fatal cases 6,300 units. Anti-streptococcus serum was given in 27 cases. 19 recovered cases had on an average 36 c.c., and 8 fatal ones 75 c.c.

MIXED INFECTIONS.—Whooping-cough, 5; measles and whooping-cough, 1; puerperal fever, 2; erysipelas, 1; measles, 9; diphtheria, 2.

CROSS INFECTIONS.—One case was incubating measles, but no secondary cases resulted.

Three cases contracted scarlet fever in hospital.

“RETURN” CASES.—28 days is taken as the period within which a case is regarded as a “return.” In the following figures, cases which proved on observation not true cases have been disregarded. 8 cases are supposed to have infected 14 others, including secondary

cases. All the "infecting" cases were clean while in hospital; one of them had a mild albuminuria. They were all mild in character. In the first quarter of the year, 2 so-called infecting cases were discharged; in the second quarter, 1; in the third quarter, 1; and in the fourth quarter, 4. Nine of the "return" cases were mild, 3 moderate, and 1 severe, which died.

The difficulties in determining the true infectivity rate are considerable. It will be noted that all the so-called infecting cases, with the exception of one who had a mild albuminuria, had no discharges or complications in hospital. In 7 instances at least, a member of the same family came in with scarlet fever a few days before another member went home. In two other instances, cases were discharged who had not scarlet fever.

The infectivity rate is 0.9 per cent. of all cases discharged.

The number of days elapsing between discharge of "infecting" cases and onset of "return" cases is shown in the following table:—

FIRST WEEK.		SECOND WEEK.		THIRD WEEK.		FOURTH WEEK.	
No. of Days.	Cases.	No. of Days.	Cases.	No. of Days.	Cases.	No. of Days.	Cases.
1	—	8	2	15	3	22	—
2	1	9	—	16	—	23	—
3	—	10	—	17	—	24	1
4	—	11	—	18	—	25	—
5	3	12	—	19	1	26	—
6	—	13	—	20	—	27	—
7	2	14	1	21	—	28	—

	1915-19.	1920.	1921.	1922.	1923.	1924.
Number of Scarlet Fever Patients discharged recovered, - - -	2,940	985	997	979	879	818
Number of presumably Infectious Cases discharged, - - -	81	35	37	37	24	8
Infectivity-rate, - - -	2·7	3·5	3·7	3·7	2·7	0·9
Number of Deaths from Scarlet Fever, - - - -	85	10	19	18	19	16
Fatality-rate, - - - -	2·6	1·0	1·8	1·8	2·1	1·9
Average duration in days of the cases discharged, - - -	47·4	44·9	56·6	47·5	49·2	50·2

Dick Test.

The Dick Test for scarlet fever was performed in 61 cases of scarlet fever and 8 of the staff, with the following results :—

DAY OF DISEASE.	Positive.	Pseudo and Positive.	Negative	Pseudo and Negative.	Doubtful.	TOTAL.
1 - - - -	6	—	2	—	—	8
2 - - - -	3	1	3	10	—	17
3 - - - -	—	1	6	4	—	11
4 - - - -	—	—	3	2	—	5
5 - - - -	—	1	1	1	—	3
6 - - - -	—	—	3	2	—	5
7 - - - -	—	—	2	—	—	2
8 - - - -	—	—	1	4	—	5
9 - - - -	—	—	1	1	—	2
10-14 - - -	1	—	1	1	—	3
Staff with no history of Scarlet Fever, - -	—	1	2	4	1	8
Total, - - -	10	4	25	29	1	69

20·2 %.

79·7 %.

Diphtheria.

At the beginning of the year 30 cases of diphtheria were in hospital, and during the year 295 cases were admitted as such. On observation, 89 cases were found not to be suffering from clinical diphtheria, and 1 other case proved to be diphtheria. There were thus 237 clinical cases treated throughout the year, and of these 189 were discharged well, 18 died, and 30 were in hospital at the end of the year.

REMOVAL TO HOSPITAL was carried out within the first three days of illness in 57·4 per cent. of the cases. For the fatal cases the average duration of illness prior to admission was 4·8 days. Although somewhat improved in comparison with the previous year, the figures are far from satisfactory.

DURATION OF RESIDENCE. — The average duration of residence of all cases was 40·2 days, of recovered cases 42·9 days, and of fatal cases 12·5 days. Of the recovered cases, 39 were discharged within 30 days, and 4 were in hospital over 100 days.

TYPE OF DISEASE.

Faucial Diphtheria. — In 163 cases, including 7 fatal ones, the faucial region of the throat was affected.

MILD.—In 97 instances the exudate was very limited, with little or no toxæmia. Six cases had antitoxin before admission, and the average amount of serum given in hospital was 6,200 units.

Complications and Sequelæ. — Adenitis, 1; arrhythmia, 5; albuminuria, 1; mastoiditis, 1; otitis media, 4; rhinitis, 1; serum rash, 3.

MODERATE.—In 28 instances the membrane or exudate was more extensive, and was accompanied by considerable toxæmia. Four cases had antitoxin before admission, and the average amount of serum given was 13,900 units.

Complications and Sequelæ. — Adenitis, 3; albuminuria, 1; arrhythmia, 1; palatal paralysis, 2; otitis media, 2; serum rash, 3.

SEVERE. — 38 cases, including 7 fatal ones, were of the severe type. Three cases had serum before admission to hospital. The average amount of serum given was 38,800 units.

Complications and Sequelæ. — Adenitis, 6; albuminuria, 9; arrhythmia, 5; hemiplegia, 1; myocarditis, 2; otitis media, 2; paralysis, 16; pulmonary thrombosis, 1; rhinitis, 2; serum rash, 3.

Laryngeal Diphtheria.—In 24 cases, including 1 fatal case, the larynx was involved.

MILD.—In 9 cases the obstruction was slight. One case had serum before admission to hospital. The average amount of serum given was 6,200 units.

Complications and Sequelæ.—Albuminuria, 1; otitis media, 1; serum rash, 2.

MODERATE.—Four cases showed signs of more extensive laryngeal obstruction. The average amount of serum given was 16,000 units. One case had tuberculosis of the abdomen.

SEVERE.—In 11 cases, including 1 fatal one, the obstruction was extreme. These patients all required operative interference. The average dose of serum given was 17,400 units.

Complications and Sequelæ.—Furunculosis, 1; nephritis, 1.

Faucial and Laryngeal Diphtheria.—The fauces and larynx were involved in 8 cases, including 2 deaths.

Of four mild cases, one had serum before admission. The average amount of serum given was 9,000 units. Two cases of moderate severity had on an average 10,000 units of serum. Two very severe cases died, and the average amount of serum given was 30,000 units. Both had tracheotomy performed.

Complications and Sequelæ.—Albuminuria, 1; broncho-pneumonia, 1; cardiac paralysis, 1; otitis media, 1; serum rash, 1.

Faucial and Nasal Diphtheria.—Eight cases, including 5 fatal ones, were of this type. All were severe, and only 1 had serum before admission. They had on an average 85,000 units of serum. Four cases had, in addition, anti-streptococcus serum.

Complications and Sequelæ.—Adenitis, 3; albuminuria, 2; broncho-pneumonia, 1; epistaxis, 1; nephritis, 2; paralysis, 5; rhinitis, 2; serum rash, 1. One case had tuberculosis of the lungs.

Nasal Diphtheria.—Of 3 nasal cases, 2 were fatal. The average amount of serum given was 38,600 units, and one had anti-streptococcus serum.

Complications and Sequelæ.—Adenitis, 1; albuminuria, 1; broncho-pneumonia, 1; palatal paralysis, 1.

Faucial, Nasal, and Laryngeal Diphtheria.—A girl, aged 3 years, had been ill 8 days before admission. She had 40,000 units of serum, and died from cardiac failure.

The following table summarises the sites of membrane in the total cases discharged :—

SITE OF MEMBRANE.	MILD.		MODERATE.		SEVERE.		TOTAL.	
	Recovered.	Died.	Recovered.	Died.	Recovered.	Died.	Recovered.	Died.
Faucial. - - - - -	97	—	28	—	31	7	156	7
Laryngeal, - - - - -	9	—	4	—	10	1	23	1
Faucial and Laryngeal, - -	4	—	2	—	—	2	6	2
Faucial and Nasal, - - -	—	—	—	—	3	5	3	5
Nasal, - - - - -	—	—	—	—	1	2	1	2
Faucial, Nasal, and Laryngeal,	—	—	—	—	—	1	—	1
							189	18

DIPHThERITIC PARALYSIS.—26 cases, or 12·5 per cent. of the clinical cases discharged, developed paralysis in one form or another while in hospital. In addition, other 10 cases had some irregularity of the pulse. The regions affected were:—Heart, 9; palate, 16; pharynx, 1.

MIXED INFECTIONS.—Diphtheria and erysipelas, 1; diphtheria and measles, 5; diphtheria and scarlet fever, 1.

COMPLICATIONS.—26·4 of the recovered cases developed one or more complications.

OTHER CONDITIONS PRESENT ON ADMISSION.—Blepharitis, 1; cardiac disease, 1; impetigo, 2; tuberculosis, 4.

CORRECTED DIAGNOSES. — 89, or 30·1 per cent. of the 295 cases admitted, were wrongly diagnosed: — Œdema glottis, 1; broncho-pneumonia, 4; congenital syphilis, 1; erysipelas, 1; foreign body in bronchus, 1; measles, 10; naso-pharyngitis, 1; negative, 3; pleural effusion, 1; pneumonia, 1; positive swab, 27; pyorrhœa, 1; rhinitis, 2; rickets, 1; scarlet fever, 14; serous meningitis, 1; sore throat, 16; tonsillar abscess, 2; tonsillitis, 1.

FATALITY RATE.—18 cases, or 8·6 per cent. of the 207 cases discharged, were fatal.

FATAL CASES. — Of the 18 deaths, 7 were males and 11 females. The average age was 6 years; the average duration of illness prior to admission was 4·8 days; and the average residence in hospital was 12·5 days. Three cases died from broncho-pneumonia.

OPERATIVE TREATMENT.—In 13 cases tracheotomy was necessary. Of these, 3, or 23 per cent., died.

ANTITOXIN.—16, or 7·7 per cent. of the cases discharged, had serum before admission to hospital. Of the cases classified as mild, 7·2 per cent., had serum, but of the severe cases only 12·7 per cent. received antitoxin before admission. The average amount of serum given in hospital was 26,000 units. After-effects were noted in 13 cases, all of which were urticarial. Messrs. Parke, Davis, & Company's antitoxin was used throughout the year.

Schick Test.

The Schick test was performed in 80 cases of scarlet fever. 20 cases were positive, including 5 pseudo-positive, and 60 were negative, including 11 pseudo-negative reactions.

Years,	AGE-PERIODS.													Over		Total.
	1	2	3	4	5	6	7	8	9	10	15	20	20			
Positive,	—	1	2	2	3	2	3	2	—	2	3	—	—			20
Negative,	1	3	4	8	8	7	5	5	4	5	7	1	2			60
Total,	1	4	6	10	11	9	8	7	4	7	10	1	2			80

The test was performed in 33 cases of diphtheria. Two cases were positive and 31 negative.

Day of Disease.														Over		Total.
	1	2	3	4	5	6	7	14	21	28	28	28	28			
Positive,	-	-	—	—	—	—	—	1	—	—	—	1	—			2
Negative,	-	-	—	—	3	1	6	2	4	8	4	—	3			31
Total,	-	—	—	3	1	6	3	4	8	4	1	3	33			

A REVIEW OF THE OPERATIONS FOR LARYNGEAL DIPHTHERIA IN THE COUNTY HOSPITAL, MOTHERWELL, 1898-1922.

It is of interest to review the operative treatment of severe laryngeal diphtheria for a period of 25 years, with special reference to intubation. This period is conveniently divided into two—1898-1913, when tracheotomy was the only operative procedure, and 1914-1922, during which intubation was the operation of choice.

Indications for Operation.—In assessing the relative values of two totally different procedures, the types of case and the indications for operation should be similar. In the present review this is impossible, as no fewer than eight different persons were operating, whose views regarding the time of interference, and the type of case suitable for operation, may have differed considerably. Early operation should show a high operative rate with a small fatality rate, whereas late operation, more or less, would result in the reverse.

In the former or tracheotomy period, it is now impossible, through lapse of time, to determine whether one or other, or both standards held. During the latter or intubation period, one operator was responsible for well over 90 per cent. of the cases, and his standard for interference remained the same for tracheotomy and intubation. Shortly, this standard is—(1) No case was operated on unless marked laryngeal obstruction was present, and patient was in danger of dying from asphyxia. Many cases, with considerable laryngeal obstruction, recovered by treatment without operation. We consider it more creditable to save life by treatment, if possible, than by operation, however well the latter may be performed. (2) All cases, no matter how ill, were given a chance of recovery by operation. Several cases, admitted moribund, were rescued by immediate operation.

The following figures, although not exactly comparable, for the reasons already stated, are not without interest:—

	1898-1913	1914-1922
Total cases of diphtheria,	1,619	1,884
Percentage of mixed laryngeal cases, ...	23·4	27·2
Percentage of pure laryngeal cases, ...	15·3	22·7
Operative rate (total diphtheria), ...	9·9	12·7
Fatality rate (total diphtheria), ...	10·0	13·4
Number of intubations,	—	151
Number of tracheotomies,	161	59
Number of intubations and tracheotomies, ...	—	31
Total operations,	161	241
Fatality rate in operative cases, ...	35·5	40·6

In the latter column only true cases of diphtheria are included. All cases of post-scarlatinal diphtheria and measles are excluded.

For the period 1914-1922 all the figures are higher. The operative fatality rate is 5 per cent. higher, and should be interpreted with the facts above noted, viz., moderately severe cases recovered without operation, and apparently hopeless cases were operated on.

YEAR.			Number of Tracheotomies.	Recovered.	Fatal
1898,	...	...	3	3	—
1899,	...	...	3	2	1
1900,	...	...	3	2	1
1901,	...	...	3	2	1
1902,	...	...	3	1	2
1903,	...	...	2	2	—
1904,	...	...	5	2	3
1905,	...	...	10	6	4
1906,	...	...	7	3	4
1907,	...	...	17	9	8
1908,	...	...	10	7	3
1909,	...	...	15	9	6
1910,	...	...	21	12	9
1911,	...	...	18	13	5
1912,	...	...	15	11	4
1913,	...	...	26	20	6
Total,			161	104	57

Intubation Period, 1914-1922. — The following table shows the operations for the period. The war, holidays, &c., to some extent interrupted the intubation trial.

Year.	Number of Tracheotomies.	Recovered.	Died.	Number of Intubations.	Recovered.	Died.	Number of Intubations and Tracheotomies.	Recovered.	Died.
1914	27	17	10	5	3	2	2	—	2
1915	9	2	7	20	16	4	4	2	2
1916	6	2	4	6	3	3	1	—	1
1917	—	—	—	18	12	6	2	1	1
1918	6	3	3	14	11	3	4	1	3
1919	—	—	—	23	18	5	4	1	3
1920	1	—	1	25	17	8	3	3	—
1921	1	—	1	26	18	8	2	—	2
1922	9	4	5	14	2	12	9	6	3
Total,	59	28	31	151	100	51	31	14	17

Of 59 *tracheotomy* cases, 28, or 52·5 per cent., died. The majority of this group were *in extremis*, and obviously too ill to attempt intubation.

Intubation.—151 children were intubated. Of these, 51, or 33·7 per cent., were fatal. This figure is slightly less than that for tracheotomy in the first period.

The following table gives the ages and results according to age :—

AGE-PERIOD.	INTUBATION ONLY.		INTUBATION AND TRACHEOTOMY.		ALL CASES.	
	Recovered.	Died.	Recovered.	Died.	Recovered.	Died.
0-1	6	8	—	5	6	13
-2	16	24	5	6	21	30
-3	25	9	5	3	30	12
-4	20	2	2	1	22	3
-5	18	5	2	2	20	7
-6	7	2	—	—	7	2
-7	4	1	—	—	4	1
-8	1	—	—	—	1	—
-9	2	—	—	—	2	—
-12	1	—	—	—	1	—
Total, -	100	51	14	17	114	68

Sex.—81 were males and 70 females.

Average Duration of Disease was 4·9 days. 52·3 per cent. had been ill for over three days.

Tube in Position.—Of the recovered cases, the tube was in position 24 hours or less in 8 instances. In 3 of these the tube displaced the membrane and relieved the child immediately. In 15 cases the tube remained in 24-48 hours; in 52, 3 to 7 days; in 20, 8 to 14 days; in 4, 15 to 20 days; and in 1, 5 weeks. The average for the recovered cases was 5·7 days. 40 children died with the tube in position.

Coughing out Tube.—This troublesome habit occurred in 29 recovered cases on an average 1·4 times per case, and in the fatal cases 3·1 times per case. The average for all cases was 1·9 times. 27·8 per cent. of the children coughed out the tube once or more. The greatest number of times a tube was coughed out in a recovered case was 3 times, and in a fatal case 7 times.

Number of Intubations. This refers to children coughing out the tube or unable to do without it when recovered. Taking all the cases, each child was intubated on an average 2·5 times. In 83 cases the tube was inserted once, in 29 twice, in 7 thrice, in 12 four times, in 4 five times, in 6 six times, in 5 seven times, and in 5 eight times or oftener. The greatest number of intubations performed in one case which recovered, was 14, and 23 in a case which ultimately succumbed to broncho-pneumonia.

Of the recovered cases, only one required extubation, in 4 the membrane was separated during the insertion with relief to the obstruction, and in 4 the tube became obstructed later, necessitating immediate removal by the nurse. In one case the tube was retained 5 weeks before it could be done without.

Of the fatal cases, 36 had broncho-pneumonia, 7 died from cardiac failure, 3 had diffuse bronchitis, 1 tubercle of the lungs, 1 hypertrophy of the mucous membrane of the larynx, and 1 died suddenly after coughing out the tube. In 6 cases the tube was retained over 14 days.

Intubation and Tracheotomy.—In 31 other cases intubation either failed to relieve the obstruction, or the patient persistently coughed out the tube, necessitating a secondary tracheotomy.

Tube in Position.—In this group the average duration of the intubation tube in position was 18 days. 17 were in place up to 1 week, 5 to two weeks, 6 to four weeks, 1 to two months, 1 three months, and 1 six months.

Coughed out Tube.—19 cases coughed out the tube once or oftener, 2 once, 4 twice, 6 thrice, 1 six times, 3 seven times, 2 eight times, and 1 eleven times. The average was 4·3 times.

Number of Intubations.—The average number of intubations was 5 in each case. In 10 the operation was performed once, 5 twice, 1 four times, 2 five times, 1 six times, 3 seven times, and in 2 oftener. The greatest number was 17 in one case.

Tubards, Retained Tubes or Stenosis.—The difficulty which a number of cases experience in dispensing with the tube appears to

us to be the crux of the question when considering whether intubation or tracheotomy is the operation of choice. The principal difficulties are spasm of the larynx, abductor paralysis, œdema of the mucous membrane, ulceration, cicatrization, absorption of cartilage with collapse of trachea. Five of the recovered cases that had intubation only performed were unable to do without the tube for over 15 days for no evident reason. Two of these had moderate bronchitis, and the other 3 had normal temperatures.

One other case that had the tube out and in for 13 days got quite well. He remained so for several months, but developed laryngeal obstruction and was taken to a throat hospital, where he is said to have died from absorption of tracheal cartilages.

Of 51 fatal cases, 40 died with the tube in position within a few days, from toxæmia, broncho-pneumonia, &c. Four had the tube in 23, 24, 50, and 79 days respectively. These four may be classified "retained" tubes. One had pulmonary tuberculosis, 1 broncho-pneumonia, and 2 died suddenly after coughing out the tube. In one of these the mucous membrane was found to be much thickened under the epiglottis, and ulceration was present in the trachea opposite the thickened part of the tube.

Of the 31 cases that had both operations performed, difficulty was experienced in getting rid of the tube in 11 instances. The tube in those cases was in 10 days to 6 months.

In 3 cases tracheotomy was the primary operation, and intubation was performed to get rid of the cannula. In one other case after intubation and tracheotomy a secondary intubation had to be done to get rid of the cannula.

SOME INTERESTING CASES OF RETAINED TUBES.

(1) Female, æt. 2, had been ill with laryngeal obstruction for 5 days. She had intubation performed on 9th April, 1922. After an attempt was made to remove the tube she got into the way of coughing out the tube until 23rd April, 1922, when tracheotomy was performed. Six days later the intubation tube was reinserted to get rid of the cannula. She was extubated on 11th June, 1922. She was discharged after a residence of 144 days apparently well. On 17th January, 1924, the child was again admitted with signs of obstruction necessitating an immediate tracheotomy. The condition was due to the old stricture closing down. The stenosis had to be slit up before an intubation tube could be inserted. For a year dilatation with large intubation tubes was

persisted with. For four months before dismissal the tube was out. During this period she went through an attack of severe whooping-cough without requiring reinsertion of the tube. She was in hospital the second time 451 days, and went out apparently well, but with a deep bass voice.

(2) Female, æt. 5. This girl had been ill 6 days before coming into hospital. Intubation was immediately performed, but she persistently coughed out the tube. Tracheotomy was performed 4 days later. The cannula was in and out for two months, resulting in a stenosis. The scar was excised on 17th January, 1922, and an intubation tube inserted. This was finally discarded on 30th May, 1922. She was discharged, three months later, well, and has remained so until now, 1925. In this case the tracheotomy tube was left in position too long.

(3) Female, æt. 4. In this case, coughing out the tube necessitated tracheotomy. She was intubated on successive occasions for 2 months, during which period the tracheotomy wound was re-opened twice. Finally, she went home well.

(4) Female, æt. 15 months. This child could not do without the tube, apparently from nervousness. After a time she began to cough out the tube, and tracheotomy was performed. The cannula could not be done without. It was also left in too long, resulting in a stenosis. The scar was excised and a large size of intubation tube put in. As the parents insisted on taking the child home, the cannula was reinserted. Four years later the parents, getting tired of the trouble of the tube, had her admitted to the Children's Hospital, where the scar was again excised and an endeavour made to epitheliumise the raw tissue. This, however, failed, and she still wears the tube.

(5) Male, æt. 3 years. This was a similar case where the tube was retained on account of nervousness. Whenever one looked at the child he got into a state bordering on hysteria. In the endeavour to get rid of the tube a tracheotomy was done. Again, the cannula was left in rather long without re-intubation. The father removed this child with the cannula in place. Some months later the stricture was excised and a rubber tube inserted and held in place by silk. Again, the father took the child home. At least two more endeavours were made to get rid of the cannula in general hospitals without success.

(6) Female, æt. 1 year. In this case also, a secondary tracheotomy was performed after the child coughed out the tube 10 times. Later, she was re-intubated. She died from a broncho-pneumonia with the tube in position. The post-mortem examination showed ulceration and absorption of cartilages of the trachea below the tracheotomy wound.

(7) Male, æt. 1 year. This child died from a chronic basal pneumonia with the tube in position, after both operations had been performed. The mucous membrane of the larynx was markedly œdematous, but showed no ulceration.

Conclusions.—Of 131 cases of intubation 9 may be said to be tubards, and of 31 cases of intubation and tracheotomy, 11. This gives a percentage of nearly 11. This includes cases that had the tube in position a considerable time, and fatal cases that lived long enough to present difficulty in removing the tube. Cases which died from diphtheria within a few days are excluded. Two cases were discharged with tracheotomy tubes in position. Although stenosis may occur after tracheotomy, it is comparatively rare. We have not discharged a case with a tube in position following tracheotomy only, although one case in hospital at present is an example of a retained tube after tracheotomy alone. She is a girl, aged 10 years, who had been ill at least 7 days with post-scarlatinal laryngeal diphtheria. She was moribund on admission, and a tracheotomy was performed immediately. Several casts of the air passages were expelled, and, no doubt, ulceration of the trachea was present. For six months she has been unable to do without the tube. An intubation tube is in position to try and get rid of the cannula. When the intubation tube is removed for cleaning, the breathing becomes obstructed immediately. There appears in this case to be collapse of the tracheal wall.

(1) Intubation is the more difficult operation until the operator obtains a high degree of proficiency, after which as an operation it is superior to tracheotomy. By an expert it is more rapid than tracheotomy. It is not an operation for the amateur.

(2) There is much more after-treatment and watching than with tracheotomy.

(3) The operator must always be on the spot when a tube is in position.

(4) Coughing out the tube is a real danger.

(5) Stenosis or difficulty in getting rid of the tube, which occurs in a number of cases, is a great disadvantage, and is more frequent than after tracheotomy.

(6) Intubation is of great help in getting rid of a retained tracheotomy cannula.

(7) Intubation should not be done in a child who is extremely ill, nor should it be done after measles or scarlet fever.

(8) In a number of cases a secondary tracheotomy is necessary. In those cases the intubation tube should be re-inserted as soon as possible, compatible with the condition of the patient.

(9) Tracheotomy should not be done to get rid of a retained intubation tube.

Enteric Fever.

At the beginning of the year 3 cases of enteric fever were in hospital. During the year 35 cases were admitted. Of these 38 cases, 17 were wrongly diagnosed. One case, notified as pneumonia, proved to be a case of enteric fever. There were thus 22 cases under treatment; of these, 21 recovered and 1 died.

REMOVAL TO HOSPITAL was carried out during the first week of illness in 2 cases, or 9 per cent.; during the second week in 13 cases, or 59 per cent.; during the third week in 6 cases, or 27·2 per cent.; and during the fourth week in 1 case, or 4·5 per cent.

THE AVERAGE DURATION OF RESIDENCE of all cases discharged was 48·6 days; of recovered cases, 50·8 days; and of fatal cases, 2 days.

SEX.—12 were males and 10 were females.

THE AVERAGE AGE of the patients was 28 years, and the average day of disease on admission was 12·8 days.

FATALITY RATE. — One case was fatal. This was a girl aged 19 years, who was notified as pneumonia. She was admitted dying from general peritonitis, resulting from a perforation.

TYPE OF DISEASE.—8 cases were classified as mild, 5 as moderately severe, and 9 as very severe.

Table showing type of disease and time of admission to hospital :—

Week of Illness.	Mild.		Moderate.		Severe.				Total Cases and Week of Illness.	
					Recovered.		Died.			
	No. of Cases.	Percentage.	No. of Cases.	Percentage.	No. of Cases.	Percentage.	No. of Cases.	Percentage.	No. of Cases.	Percentage.
First, - - - -	2	25·0	—	—	—	—	—	—	2	9·0
Second, - - - -	4	50·0	3	60·0	6	75·0	—	—	13	59·0
Third, - - - -	2	25·0	2	40·0	1	12·5	1	100·0	6	27·2
Fourth, - - - -	—	—	—	—	1	12·5	—	—	1	4·5
Total, - - -	8	36·3	5	22·7	8	36·3	1	4·5	22	—

COMPLICATIONS. — 45·4 per cent. of the cases had one or more complications. These were: — Perforation, 1; hæmorrhage, 3; empyema, 1; relapse, 1; pneumonia, 1; thrombosis, 1; bacilluria, 1; abscess, 1; albuminuria, 2.

CORRECTED DIAGNOSES. — 8 cases had positive Widal reaction, without clinical signs. The others were:—Diarrhœa, 1; encephalitis lethargica, 2; influenza, 3; malignant endocarditis, 1; pneumonia, 1; septicæmia, 1.

PARATYPHOID FEVER.—The last case of the small outbreak at the Kype Water Works was in hospital at the beginning of the year. He developed an empyema. The other two cases were from Mossend and New Stevenston. The three cases were Paratyphoid B. infections.

Bacteriological Examination of Fæces.—The County Bacteriologist examined 70 specimens; 64 were negative, 3 were positive, and 3 Paratyphoid B.

Puerperal Fever.

Nine cases were in hospital at the beginning of the year, and 45 were admitted throughout the year. Five cases were wrongly diagnosed, and 2 other cases proved to be cases of puerperal fever. Of these 51 cases, 35 were discharged well, 13 died, and 3 were in hospital at the end of the year.

TYPE OF DISEASE.—9 were mild, 15 moderate, and 24 severe.

THE AVERAGE AGE of the patients was 30·4 years; 2 were under 20 years of age, 24 between 21 and 30 years, 17 between 31 and 40 years, and 5 between 41 and 50 years of age.

THE AVERAGE DURATION OF ILLNESS of all cases prior to admission was 12·3 days; of recovered cases, 12·6 days; and of fatal cases, 9·5 days.

THE AVERAGE DURATION OF RESIDENCE was 29·9 days.

ATTENDANCE AT BIRTH. — Doctor, 11; midwife, 12; doctor and midwife, 21; neighbour, 1; hospital cases, 2; nil, 1.

THE FATALITY RATE was 27 per cent.

COMPLICATIONS AT BIRTH. — Instrumental delivery, 17; mis-carriage, 6.

NUMBER OF PREGNANCY at which disease occurred :—

Para.	No. of Cases.	Died.	Instrumental Delivery.	Died.
1	15	6	9	4
2	5	—	1	—
3	7	2	—	—
4	2	—	—	—
5	4	1	1	—
6	3	1	2	—
7	1	—	—	—
8	2	1	1	1
9	3	1	2	1
10	2	—	1	—
11	3	1	—	—
13	1	—	—	6

COMPLICATIONS DURING THE FEVER.—Abscess, 1; albuminuria, 2; anæmia, 4; arthritis (septic), 1; bacilluria, 2; endocarditis, 1; jaundice, 2; hæmorrhage, 1; mastitis, 1; mental, 1; pericarditis, 1; peritonitis, 3; pneumonia, 3; thrombosis, 5.

CORRECTED DIAGNOSES.—The 5 cases wrongly diagnosed proved to be—burn, 1; cysto-adenoma, 1; extra-uterine pregnancy, 1; gangrene lung, 1; meningitis, 1.

Two cases diagnosed pneumonia proved to be cases of puerperal fever.

Erysipelas.

Four cases were in hospital at the beginning of the year, 36 were admitted, 9 were wrongly diagnosed, and 1 other case notified diphtheria proved to be a case of erysipelas. Of these 32 cases, 27 recovered, 1 died, and 4 were in hospital at the end of the year.

SEX.—Males, 20; females, 8.

TYPE OF DISEASE.—Mild, 5; moderate, 11; severe, 12.

SITUATION OF DISEASE.—Face, 16; leg, 5; arm, 3; face and back, 2; face and arm, 1; nose, 1.

THE AVERAGE AGE was 35 years; the average duration of illness prior to admission was 7·5 days; the average residence of all cases was 31·6 days; of recovered cases, 32·4 days; and of fatal cases, 9 days.

THE FATALITY RATE was 3·5 per cent. of the cases discharged.

COMPLICATIONS.—Abscess, 1; cellulitis, 6; endocarditis, 1; relapse, 1; septic antrum of Highmore, 1.

CORRECTED DIAGNOSES.—Abscess, 1; cellulitis, 1; carbuncle, 1; erythema, 1; impetigo, 1; osteomyelitis, 1; pyæmia, 1; tuberculosis, 1; varicose ulcer, 1.

Tuberculosis.

Eight cases of tuberculosis were in hospital at the beginning of the year, and 162 were admitted. Sixteen were wrongly diagnosed, and 15 other cases proved to be cases of tuberculosis. Of these 169 cases, 131 were discharged in varying stages of improvement, 23 died, and 15 were in hospital at the end of the year.

The following table shows the age-periods and sexes of the cases discharged :—

AGE.	RECOVERED.		DIED.		TOTAL.	
	Males.	Females.	Males.	Females.	Males.	Females.
-5 years, -	12	8	8	8	20	16
- 10 „ -	8	15	—	1	8	16
- 15 „ -	6	13	1	1	7	14
- 20 „ -	5	8	—	1	5	9
- 25 „ -	11	7	—	—	11	7
- 30 „ -	10	4	—	—	10	4
- 35 „ -	4	—	2	—	6	—
- 40 „ -	6	4	1	—	7	4
Over 40 „ -	9	1	—	—	9	1
	71	60	12	11	83	71

SEX.—Male, 83; female, 71.

THE AVERAGE AGE was 17·6 years, and the average residence was 29 days.

CLASSIFICATION OF CASES.

Glands, - 67	Skin, - - 9	General, - 5
Bones, - 14	X-ray -	Meningeal, 19
Spine, - 5	Examination, 3	Lungs, - 21
Joints, - 10	Eye, - - 1	

GLANDULAR CASES.—Sex.—Male, 27; female, 40.

The average age was 13·5 years, and the average duration of residence 28·1 days. Approximately 67 per cent. were under 15 years of age, 20·8 per cent. being under 5 years of age, 25·3 per cent. between 6 and 10 years, 20·8 per cent. between 11 and 15 years, and 32·8 per cent. over 15 years of age.

Most of the glandular cases showed abscess or sinus formation. Most were opened, and endeavours made to have the patients transferred to sanatoria for convalescence. In addition, teeth and diseased tonsils were treated.

OSSEOUS CASES.—Sex.—Male, 9; female, 5. The average age was 19·1 years, and the average stay in hospital was 43·5 days. Four cases were under 5 years of age, two between 6 and 10 years, three between 11 and 15 years, and five over 15 years of age. The bones affected were:—Fingers, 5; toe, 1; jaw, 1; ribs, 2; femur, 1; multiple, 3. In addition one case had an old amputation stump repaired.

SPINE CASES.—Sex.—Male, 4; female, 1. The average age was 26 years, and the average residence in hospital was 28 days. The ages were 8, 16, 24, 41, and 41 years. Three cases had psoas abscesses, 1 a healed spine with favus of the head, and 1 a post-pharyngeal abscess of spinal origin.

JOINT CASES.—Sex.—Male, 9; female, 1. The average age was 26·6 years, and the average residence in hospital was 38·9 days. The joints affected were:—Hip, 6; elbow, 1; sacro iliac, 1; knee, 2.

EYE CASE.—A female, aged 10 years, was in hospital 21 days with a tubercular keratitis.

X-RAY EXAMINATIONS.—Two males and one female were admitted for X-ray examination of kidney, chest, and hip-joint respectively.

SKIN CASES.—Sex.—Male, 5; female, 4. The average age was 24 years, and the average residence 42·8 days. One case was under 10 years of age, one between 11 and 15 years, three between 16 and 20

years of age. Lupus was present in 4 cases, and 5 had tubercular skin or ugly scars.

GENERAL TUBERCULOSIS.—Of 5 male cases, 3 proved fatal. The average age was 5·8 years, and the average residence 57·2 days. Four were under 5 years of age, and one was 21 years of age.

MENINGEAL.—Sex.—Male, 8; female, 11. These all proved fatal, and 10 were wrongly diagnosed.

The average age was 7·9 years, and the average residence 6·8 days. Thirteen cases were under 5 years of age; one between 6 and 10 years; two between 11 and 15 years; and three were over 15 years of age.

PULMONARY TUBERCULOSIS.—Sex.—Male, 14; female, 7. One case proved fatal. The average age was 29·8 years, and the average stay in hospital was 28·7 days. One case was under 5 years of age, two between 16 and 20 years, five between 21 and 25 years, five between 26 and 30 years, five between 31 and 40 years, and three were over 40 years of age.

Reason for Admission.—Abscesses, 8; empyema, 2; pleural effusion, 3; for pneumo-thorax treatment, 1; diabetes, 1; appendicitis, 1.

FATAL CASES.—Sex.—Male, 12; female, 11. The average age was 8 years, and the average residence 14 days.

Type of Disease.—Meningeal, 19; general tuberculosis, 3; pulmonary tuberculosis, 1.

Sixteen cases were under 5 years of age, 1 between 6 and 10 years, 2 between 11 and 15 years, 1 between 16 and 20 years, and 3 were over 20 years of age.

CORRECTED DIAGNOSES.—Malnutrition, 1; pulmonary fibrosis, 1; diseased tonsils, 1; otitis media, 1; pyogenic abscesses, 2; negative, 1; chronic bronchitis, 1; tumour kidney, 1; empyema, 4; pneumococcal meningitis, 2; influenzal meningitis, 1.

Fifteen cases which proved to be tuberculosis were admitted as suffering from other diseases, viz.:—Pneumonia, 5; erysipelas, 1; scarlet fever, 1; encephalitis lethargica, 5; cerebro-spinal meningitis, 2; measles, 1.

Pneumonia.

Four cases were in hospital at the beginning of the year; 133 were admitted, of which 43 were wrongly diagnosed, and 10 cases notified as suffering from other diseases proved to be cases of pneumonia. Of these 104 cases, 65 recovered, 25 died, and 14 were in hospital at the end of the year.

The following table shows the age-periods and the sex of the cases discharged :—

AGE.	RECOVERED.		DIED.		TOTAL.	
	Males.	Females.	Males.	Females.	Males.	Females.
- 5 years, - -	7	3	9	4	16	7
- 10 „ - -	3	1	—	—	3	1
- 15 „ - -	7	4	—	1	7	5
- 20 „ - -	8	7	1	—	9	7
- 25 „ - -	1	1	—	—	1	1
- 30 „ - -	5	1	2	—	7	1
- 35 „ - -	7	1	1	—	8	1
- 40 „ - -	2	1	2	2	4	3
Over 40 „ - -	3	3	3	—	6	3
	43	22	18	7	61	29

THE AVERAGE AGE of all cases was 18 years.

THE AVERAGE DURATION OF ILLNESS of all cases prior to admission was 7 days; of recovered cases, 5·6 days; and of fatal cases, 11·5 days.

THE AVERAGE RESIDENCE of all cases was 26·7 days; of recovered cases, 34·7 days; and of fatal cases, 6 days.

TYPE OF DISEASE. — Apical, 4; broncho-pneumonia, 18; convalescent, 2; double, 1; lobar, 59; tubercular, 2; unresolved, 4.

THE FATALITY RATE was 27·7 per cent.

COMPLICATIONS.—Abscess leg, 1; carbuncle, 1; chronic bronchitis and empyema, 1; double empyema, 1; empyema, 4; nephritis, 1; otitis media, 1; post-measles, 1; post-measles and whooping-cough, 2; post-whooping-cough, 1; thrombosis large vessels, 1.

CORRECTED DIAGNOSES.—Bronchitis, 16; sarcoma lung, 2; colic, 1; chronic bronchitis and cardiac disease, 1; diarrhoea, 1; diphtheria, 1; effusion, 1; enteric fever, 1; empyema, 2; influenza, 1; negative,

8; otitis media, 1; puerperal fever, 2; tuberculosis, 4; whooping-cough, 1.

CASES WHICH PROVED TO BE PNEUMONIA on observation were admitted to hospital as:—Diphtheria, 5; cerebro-spinal fever, 1; encephalitis lethargica, 1; enteric fever, 1; measles, 1; scarlet fever, 1.

Measles.

Two cases were in hospital at the beginning of the year, 38 were notified, 3 were wrongly diagnosed, and 13 others proved to be cases of measles. Of these 50 cases, 39 recovered and 11 died.

SEX.—Male, 29; female, 21.

THE AVERAGE DAY OF ILLNESS in all cases was 7·6 days; of recovered cases, 7·1 days; and of fatal cases, 10·8 days.

THE AVERAGE AGE was 5 years, and the average residence in hospital 23·2 days. Four cases were under 1 year of age, 7 were under 2 years, 12 between 2 and 3 years, 9 between 3 and 4 years, 6 between 4 and 5 years, 7 between 6 and 10 years, 2 between 11 and 20 years, and 3 were over 20 years of age.

THE FATALITY RATE was 22 per cent.

CORRECTED DIAGNOSES. — Diphtheria, 1; pneumonia, 1; tuberculosis, 1.

OTHERS WHICH PROVED TO BE MEASLES.—Diphtheria, 10; cerebro-spinal fever, 1; scarlet fever, 2.

COMPLICATIONS. — Adenitis, 1; appendicitis, 1; bronchitis, 3; broncho-pneumonia, 8; cancrum oris, 2; corneal ulcer, 1; otitis media, 5 (2 chronic).

Note.—One case was admitted with ulcers on both corneæ. This child was discharged blind.

One case had measles and whooping-cough, and one measles and diphtheria.

Whooping Cough.

Six cases were notified as whooping-cough, and one other proved to be a case of the disease.

The average residence was 51 days.

Encephalitis Lethargica.

Forty-one cases were sent into hospital as encephalitis lethargica, 13 were wrongly diagnosed, and 3 other cases proved to be cases of

this disease. Of these 31 cases, 20 were discharged recovered or improved, 9 were fatal, and 2 were in hospital at the end of the year.

SEX.—Males, 14, including 2 fatal cases; females, 15, including 7 fatal cases.

THE AVERAGE DURATION OF ILLNESS on admission was 17·4 days; the average residence, 27·1 days; and the average age was 25·6 years.

AGE-PERIODS. — Under 10 years of age, 2; 11 to 20 years, 6; 21 to 30 years, 13; 31 to 40 years, 1; 41 to 50 years, 6; over 50 years of age, 1.

THE FATALITY RATE was 31 per cent. of the discharges.

The following is a short synopsis of the clinical features of the 29 cases :—

ONSET.—The onset in the majority of the cases was more or less sudden, in so far as a definite date of the first signs could be elicited. Only in a very few was the onset gradual. In these the first signs noticed by the friends of the patients was slight drowsiness or insomnia. An interesting case in this group was a girl resident in a sanatorium. The first sign was a change in her manner. She gradually became morose and refused to speak. For a time it was questionable if she were developing tuberculous meningitis. The further course of the disease was that of encephalitis lethargica. A few days before the girl died her speech returned. All tests of the cerebro-spinal fluid for tubercle were negative. In one case of a young adult the onset of restlessness and myoclonus was after he had been struck on the head with a football. Within twelve hours he was maniacal, and had to be removed to an asylum.

THE RELATIVE FREQUENCY OF THE SIGNS OF ONSET were—Diplopia, 11; delirium, 9; insomnia, 7; sickness, 6; myoclonus, 5; lethargy, 2; headache, 2; diplopia and squint, 2; dimness of vision, 1; squint, 1; diarrhœa, 1.

THE FREQUENCY OF THE SIGNS AND SYMPTOMS AFTER COMING INTO HOSPITAL were—Lethargy, 14; fever, 9; insomnia, 9; diplopia, 5; myoclonus, 5; delirium, 4; ptosis, 3; facial paresis, 3; squint, 2; mental, 2; slow speech, 2; headache, 1; incontinence, 1; hemiplegia, 1.

CONDITION ON DISCHARGE.—Apparently well, 13; improved, 6; to asylum, 1; died, 9.

CEREBRO-SPINAL FLUID. — Most of the cases were punctured, but nothing beyond a slight increase in pressure and a small increase in

the lymphocytes was present. Guinea-pigs inoculated for tubercle were negative.

POST-MORTEM RESULTS.—In 3 cases nothing abnormal was detected by naked-eye examination; in 3 others distinct congestion of the meninges was present, with minute petechial hæmorrhages, chiefly in the region of the larger nuclei. In one other case a small hæmorrhage on the surface of the pons was noted.

OPHTHALMOSCOPIC EXAMINATIONS were negative.

CORRECTED DIAGNOSES. — Cerebral tumour, 1; constipation, 2; hemiplegia, 1; negative, 3; pneumonia, 1; tuberculous meningitis, 5. The 3 others were notified as—Enteric fever, 2; syphilis, 1.

Meningitis.

Eight cases were notified as meningitis. One proved to be meningococcal, 5 pneumococcal, 1 influenzal, and 1 was a case of gastro-enteritis. A case notified as encephalitis lethargica proved to be pneumococcal meningitis, and one notified as puerperal fever was a case of meningitis. The 10 cases were fatal. The average duration of illness was 6·4 days, and the average residence 6·3 days.

Enlarged Tonsils.

Fourteen cases were admitted to have large tonsils and adenoids removed. Other two cases had tonsillar abscesses opened.

Tinea Tonsurans.

Ten cases were treated for ringworm of the scalp. Six were X-rayed. The average residence was 5·7 days.

Venereal Diseases.

At the beginning of the year 5 cases were in residence, and during the year 80 were admitted. Of these, 14 were wrongly diagnosed, and 1 other case proved to be syphilis. Of these 72 cases, 54 were discharged in varying stages of improvement, 7 died, and 11 were in hospital at the end of the year.

SEX.—Male, 34; female, 27.

AGE.—Under 1 year, 10; 2 to 10 years, 2; 11 to 20 years, 3; 21 to 30 years, 33; 31 to 40 years, 6; 41 to 50 years, 3; over 50 years, 4.

The average age of the proved cases was 24 years; and the average duration of residence 32·5 days.

The indoor cases were :—Syphilis, 17 ; gonorrhœa, 29 ; syphilis and gonorrhœa, 2 ; soft sore, 1 ; paraphimosis, 2 ; bubo, 2 ; phagedæna, 1 ; ophthalmia neonatorum, 7.

CORRECTED DIAGNOSES.—Abscess, 2 ; anæmia, 1 ; encephalitis lethargica, 1 ; gangrene intestine, 1 ; herpes, 1 ; negative, 3 ; prematurity, 1 ; simple ophthalmia, 4.

COMPLICATIONS AND REASONS FOR INDOOR TREATMENT.—Abscesses, 4 ; arthritis, 2 ; chronic bronchitis and emphysema, 1 ; dermatitis, 2 ; epididymitis, 9 ; paraphimosis, 3 ; pulmonary tuberculosis, 1 ; sarcoma nose, 1 ; stricture, 2.

GNORRHŒAL OPHTHALMIA.—7 cases were treated, with complete recovery of eyesight. One other case was due to pneumococcal infection, and in 2 no organism was found.

The number and nature of the cases attending at the outdoor clinic and the areas from which they came are shown in the following table. 218 new cases were registered—163 males and 55 females.

VENEREAL DISEASES, 1924.

	Syphilis.	Gonorrhœa.	Syphilis and Gonorrhœa.	Soft Sore.	Others V. D.	Others Non V. D.	Total.	Indoor Cases.	Indoor Days.	Outdoor Attendances.
Middle Ward, -	91	58	5	—	6	37	197	43	1,173	1,767
Upper Ward, -	5	3	—	—	—	5	13	3	71	83
Lower Ward, -	—	1	—	—	—	—	1	1	23	—
Airdrie, - -	2	3	1	1	—	3	10	5	155	16
Coatbridge, - -	11	5	2	—	1	1	20	5	177	73
Hamilton, - -	22	15	5	—	—	6	48	4	194	478
Kirkintilloch, -	1	—	—	—	—	—	1	1	13	—
Lanark, -	3	2	—	—	—	—	5	2	141	14
Motherwell, -	33	24	1	1	1	10	70	6	138	800
Rutherglen, -	2	—	—	—	—	—	2	—	—	16
Wishaw, - -	9	9	3	—	—	3	24	3	69	336
Dunfermline, -	—	1	—	—	—	—	1	—	—	2
Totals, -	179	121	17	2	8	65	392	73	2,154	3,585

The following is a synopsis of the venereal diseases work since 1917:—

	1917		1918		1919		1920		1921		1922		1923		1924	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>New Cases:—</i>	67	25	157	65	367	90	434	116	315	88	214	79	171	45	163	55
Syphilis, - -	32	18	74	42	138	46	124	64	107	31	49	36	48	15	34	19
Gonorrhœa, - -	23	1	44	8	141	15	150	12	103	22	75	14	68	10	76	21
Syphilis and Gonorrhœa, - - -	2	2	5	5	16	6	22	2	9	7	4	1	4	5	1	1
Soft Sore, - -	2	—	2	—	—	—	10	—	1	—	2	—	9	—	—	—
Others V.D., - -	2	1	9	2	12	—	13	4	5	1	5	1	7	—	5	—
Others Non V.D., -	6	3	23	8	60	23	114	34	90	27	79	27	35	15	47	14
<i>Cases treated during the Year:—</i>																
Syphilis, - -	32	18	101	57	189	78	257	134	252	102	176	91	162	63	123	56
Gonorrhœa, - -	23	1	44	8	151	17	186	12	146	24	123	16	100	13	99	22
Syphilis and Gonorrhœa, - - -	2	2	8	4	24	6	44	7	35	11	24	6	24	10	12	5
Soft Sore, - -	2	—	2	—	—	—	10	—	3	—	4	—	8	—	2	—
Others V.D., - -	2	1	9	2	12	—	14	4	5	1	7	1	8	—	8	—
Others Non V.D., -	6	3	23	8	61	24	115	40	102	29	19	3	48	20	48	17
Outdoor Attendances, - - -	253	90	1261	444	4676	450	7505	237	6539	687	3536	706	3270	599	3174	411
Indoor Cases, - -	39	18	35	35	59	46	64	60	64	61	46	44	50	42	41	32
Indoor Days, - -	1050	594	864	1105	926	1136	1219	1308	1820	1485	1030	1767	1475	1264	1044	1110
Salvarsan Substitute Injections, - - -	168	103	521	333	1227	514	1779	707	1701	645	1092	664	1358	460	594	240
No. of Operations, -	7	—	16	—	24	1	27	—	19	—	10	1	14	1	10	—
„ Wassermann,	86	55	295	161	563	211	882	318	869	267	570	224	424	131	269	91
„ Smears Spirochætes,	7	—	16	3	35	—	64	—	35	1	18	—	19	—	7	—
„ „ Gonococci.	37	7	93	35	165	40	224	27	181	44	163	36	171	35	138	53

Other Diseases and Conditions.

Aneurism, 1; asthma, 1; sarcoma of lung, 2; chickenpox, 4; empyema, 3; foreign body in bronchus, 1; gangrene of lung, 1; gangrene of intestine, 1; gastro-enteritis, 1; hernia, 1; impetigo, 2; infantile paralysis, 1; influenza, 1; Ludwig's angina, 1; malaria, 1; malignant endocarditis, 1; nephritis, 2; pleural effusion, 1; prolapse rectum, 1; pyæmia, 2; rheumatism, 1; rubella, 5; scabies, 2; sore throat, 8; tapeworm, 1; tumour breast, 1; others, 9.

Electrical Department

During the year 253 cases were photographed. These were:—Chest, 203; bone, 21; spine, 8; kidney, 2; joint, 19.

The sources from which the 253 cases came were:—County Hospital, K.etherwell, 83; Cambuslang Dispensary, 59; Blantyre Dispensary, 45; Bellshill Dispensary, 17; Shotts Dispensary, 4; Lower Ward, 16; Upper Ward, 6; Doctors, 6; Venereal Diseases Centres, 5; Sanatoria, 4; Others, 8.

Operations.

During the year the following operations were performed in the hospital:—

DISEASE.		OPERATION.	RECOVERED.	DIED.	TOTAL.
Tuberculosis	Glands	Excision or Incision	62	—	62
	Bone	Removal sequestra	16	—	16
	Fingers	Amputation	1	—	1
	Spine	Evacuating abscess	2	—	2
	Skin	Excision or Scraping	4	—	4
	Joints	Arthrotomy	8	—	8
	Ischio-rectal abscess	Incision	1	—	1
	Retro-pharyngeal	Incision	1	—	1
	Pelvis	Opening abscess	1	—	1
	Amputation stump	Repair	1	—	1
Diphtheria	Laryngeal stenosis	Tracheotomy	10	3	13
	Mastoiditis	Mastoidectomy	1	—	1
	Abscess	Incision	1	—	1
Scarlet Fever	Glandular abscess	Incision	15	—	15
	Mastoiditis	Mastoidectomy	5	—	5
Enteric Fever	Empyema	Resection rib	1	—	1
Erysipelas	Cellulitis	Incision	7	—	7
	Suppurating antrum	Opening	2	—	2

DISEASE.		OPERATION.	RECOVERED.	DIED.	TOTAL.
Puerperal Fever	Septic Joint	Arthrotomy	1	—	1
	Mastitis	Incision	1	—	1
Venereal Diseases	Phimosis	Circumcision	4	—	4
	Abscesses	Incision	6	—	6
Pneumonia	Empyema	Resection rib	8	2	10
	Abscess	Incision	1	—	1
Others	Diseased tonsils	Enucleation	16	—	16
	Prolapse rectum	Alcohol injection	1	—	1
	Phimosis	Circumcision	1	—	1
	Ludwig's angina	Tracheotomy	1	—	1
	Oedema glottis	Tracheotomy	1	—	1
	Pyæmia	Arthrotomy	—	1	1
	Foreign body trachea	Tracheotomy	—	1	1
			180	7	187

The following operations were performed by the Consulting Surgeon, Dr. M'Lennan, or a substitute:—Appendicectomy, 2; incision of abdominal abscess, 1; excision of glands, 2; excision of tumour, 1; herniotomy, 1; mastoidectomy, 1; resection of rib, 4. Two cases were seen in consultation.

The Staff.

On 31st December, 1924, the indoor staff comprised 1 physician-superintendent, 1 assistant medical officer, 1 matron, 10 sisters, 2 staff nurses, 46 probationers, and 29 maids.

The outdoor staff consisted of 1 engineer, 3 firemen, 1 gardener, 5 assistant-gardeners, 2 chauffeurs, 1 V.D. attendant, and 2 clerks.

The total staff numbered 105.

LECTURES.—From October till April, lectures and demonstrations on elementary anatomy and physiology, hygiene, fevers, the theory and practice of nursing, and medical and surgical nursing, in accordance with the new syllabus of the General Nursing Council, were given by the medical staff and matron. The course in cooking and dietetics was given by the Education Authority, who granted certificates of proficiency to the successful candidates.

Nine probationers completed the examination under the old scheme and were granted the Scottish Board of Health Certificate for Fever Nursing, whilst 2 others passed the first part under this scheme. Nine probationers completed the first half of the examination under the new regulations of the General Nursing Council.

STAFF ILLNESSES.—15 probationers and 3 maids were warded for the following illnesses:—Albuminuria, 1; anæmia, 1; arthritis, 1; debility, 2; influenza, 1; nephritis, 1; observation, 1; rubella, 1; scarlet fever, 1; sore throat, 6; tonsillar abscess, 1; whooping-cough, 1. The 18 sick members of the staff lost 478 working days.

INOCULATIONS.—26 probationers were vaccinated with T.A.B. vaccine against the enteric group of diseases, and 29 had toxin antitoxin.

Buildings and Grounds.

Throughout the year the Works Department did a considerable amount of repair work in connection with the buildings and grounds. A manure pit was built close to the piggery. The steam disinfector was shifted to a new site and repaired. The Water Department renewed a number of water pipes at Pavilion No. 4 which had become inoperable from deposit. Two old railway carriages were purchased to be utilised for storage purposes. A petrol tank to store 500 gallons was installed at the garage. The old gate lodge used for staff purposes had a low-pressure heating system installed. The coal-weighing machine, damaged by a motor lorry, was renewed.

The block plan at the beginning of the report shows the present accommodation at the institution (including the new two-storey pavilion, No. 10 and 11, and an extension to the Nurses' Home), together with the sites for future extensions.

Ambulance Work.

The Austin ambulances are still giving every satisfaction.

	Admissions.	Discharges.	Tuberculosis.	Disinfections.	Others.	Total.
Patients, -	1,432	593	118	—	14	2,227
Journeys, -	1,178	287	122	70	35	1,692
Mileages, -	16,844	6,426	5,061	1,033	632	29,996

Statistics.

TABLE I.—ADMISSIONS (AS NOTIFIED) AND DISCHARGES DURING 1924, WITH THE NUMBERS IN HOSPITAL AT THE BEGINNING AND END OF THE YEAR.

Disease.	In Hospital, 1st January, 1924.		Admitted.		Discharged.				Remaining in Hospital 31st Dec. 1924.	
	M.	F.	M.	F.	Recovered.		Died.		M.	F.
					M.	F.	M.	F.		
Scarlet Fever, - -	56	79	358	520	352	527	10	8	52	64
Diphtheria, - - -	18	12	129	166	126	143	12	14	9	21
Enteric Fever, - -	1	2	18	17	18	18	1	1	—	—
Erysipelas, - - -	2	2	23	13	23	11	1	1	1	3
Puerperal Fever, - -	—	9	—	45	—	38	—	13	—	3
Tuberculosis, - - -	3	5	90	72	76	63	9	7	8	7
Pneumonia, - - -	3	1	85	48	65	35	14	9	9	5
Measles, - - -	1	1	22	16	18	12	5	5	—	—
Venereal Disease, - -	4	1	43	37	37	28	5	4	5	6
Others, - - -	1	—	59	69	40	54	18	11	2	4
	89	112	827	1,003	755	929	75	73	86	113
	201		1,830		1,684		148		199	
	2,031				2,031					

TABLE II.—ADMISSIONS AND DISCHARGES IN EACH MONTH OF THE YEAR 1924.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Admitted, - -	148	158	172	133	170	138	148	132	155	151	178	147	1,830
Discharged—													
Recovered, -	150	125	191	107	145	152	142	127	109	138	136	162	1,684
Died, - -	2	13	15	16	11	16	10	11	14	7	10	23	148

TABLE III.—AGE AND SEX OF PATIENTS DISCHARGED DURING THE YEAR 1924, WITH THE FATALITY-RATE.
SCARLET FEVER.

Age.	Male.			Female.			Total.		
	Recovered.	Died.	Fatality per cent.	Recovered.	Died.	Fatality per cent.	Recovered.	Died.	Fatality per cent.
0-1,	—	—	—	2	—	—	2	—	—
-2,	10	1	9.0	10	—	—	20	1	4.7
-3,	22	2	8.3	17	2	10.5	39	4	9.3
-4,	37	1	2.6	44	1	2.2	81	2	2.4
-5,	41	—	—	43	—	—	84	—	—
-6,	27	—	—	38	—	—	65	—	—
-7,	45	1	2.1	42	1	2.3	87	2	2.2
-8,	30	1	3.2	41	—	—	71	1	1.3
-9,	20	—	—	38	—	—	58	—	—
-10,	24	—	—	29	—	—	53	—	—
-15,	49	1	2.0	109	2	1.8	158	3	1.8
-20,	17	1	5.5	30	—	—	47	1	2.0
Over 20,	8	1	11.1	45	1	2.1	53	2	3.6
Total, - -	330	9	2.6	488	7	1.4	818	16	1.9

TABLE III. (*contd.*)—DIPHTHERIA.

Age.	Male.			Female.			Total.		
	Recovered.	Died.	Fatality per cent.	Recovered.	Died.	Fatality per cent.	Recovered.	Died.	Fatality per cent.
0-1,	3	—	—	2	1	33.3	5	1	16.6
-2,	2	2	5.0	—	—	—	2	2	50.0
-3,	9	2	18.1	4	2	33.3	13	4	23.5
-4,	10	—	—	11	1	8.3	21	1	4.5
-5,	15	1	6.2	5	1	16.6	20	2	9.0
-6,	10	2	16.6	11	—	—	21	2	8.6
-7,	7	—	—	13	2	13.3	20	2	9.0
-8,	1	—	—	12	—	—	13	—	—
-9,	3	—	—	8	—	—	11	—	—
-10,	4	—	—	5	—	—	9	—	—
-20,	16	—	—	27	4	12.9	43	4	8.5
Over 20,	3	—	—	8	—	—	11	—	—
Total,	83	7	7.7	106	11	9.4	189	18	8.6

TABLE III. (*contd.*)—ENTERIC FEVER.

Age.	Male.			Female.			Total.		
	Recovered.	Died.	Fatality per cent.	Recovered.	Died.	Fatality per cent.	Recovered.	Died.	Fatality per cent.
0-5,	—	—	—	—	—	—	—	—	—
-10,	2	—	—	1	—	—	3	—	—
-15,	3	—	—	—	1	100·	3	1	25·0
-20,	1	—	—	1	—	—	2	—	—
-25,	1	—	—	—	—	—	1	—	—
-30,	—	—	—	1	—	—	1	—	—
-35,	—	—	—	3	—	—	3	—	—
-40,	1	—	—	1	—	—	2	—	—
-45,	1	—	—	1	—	—	2	—	—
-50,	2	—	—	—	—	—	2	—	—
Over 50,	1	—	—	1	—	—	2	—	—
Total,	12	—	—	9	1	10·0	21	1	4·5

TABLE IV.—THE STAGE OF THE DISEASE IN WHICH PATIENTS DISCHARGED IN 1924, WERE ADMITTED TO HOSPITAL.

Disease.	Days of 1st Week.							Week of Illness.				Total.
	1	2	3	4	5	6	7	1st.	2nd.	3rd.	4th	
Scarlet Fever, - -	35	192	226	184	68	36	19	760	49	15	10	834
Diphtheria, - - -	13	50	55	31	27	10	9	195	11	1	—	207
Enteric Fever, - -	—	—	—	1	—	1	—	2	13	6	1	22

TABLE V.—COMPLICATIONS OBSERVED IN PATIENTS DISCHARGED DURING 1924.

Scarlet Fever.	Suppurative Cervical Adenitis.	Non-Suppurative Adenitis.	Otitis Media Purulent.	Rhinorrhœa	Cardiac Complications.	Nephritis.	Arthritis.	Mastoiditis.	Pulmonary Complications.	Skin Conditions.
In 818 Recovered Cases,	10	139	70	83	8	29	30	7	1	5
In 16 Fatal Cases, -	—	6	4	8	1	—	—	—	3	—
In 834 Cases, - -	10	145	74	91	9	29	30	7	4	5
Percentage, - - -	1·1	17·3	8·8	10·9	1·0	3·4	3·5	·8	·4	·5

Diphtheria.	Adenitis.	Rhinitis.	Otitis Media.	Cardiac Involvements.	Broncho- Pneumonia.	Bronchitis.	Paralysis.	Arrhythmia.	Nephritis.	Albuminuria.
In 189 Recovered Cases, -	11	3	10	—	—	—	23	11	1	11
In 18 Fatal Cases, - -	4	2	—	8	3	—	3	—	2	4
In 207 Cases, - - -	15	5	10	8	3	—	26	11	3	15
Percentage, - - -	7·2	2·4	4·8	3·8	1·4	—	12·5	5·3	1·4	7·2

Enteric Fever.	Perforation.	Hæmorrhage.	Bronchitis.	Relapse	Bacilluria.	Abscess.	Otitis Media.
In 21 Recovered Cases, - - -	—	3	—	1	1	1	—
In 1 Fatal Case, - - - -	1	—	—	—	—	—	—
In 22 Cases, - - - - -	1	3	—	1	1	1	—
Percentage, - - - - -	4·5	13·6	—	4·5	4·5	4·5	—

TABLE VI.—ADMISSIONS (AS NOTIFIED) SINCE OPENING OF HOSPITAL.

Year.	Enteric Fever.	Scarlet Fever.	Diphtheria.	Erysipelas.	Puerperal Fever.	Measles.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Cerebro-Spinal Fever.	Veneral Diseases.	Tinea.	Quarantine.	Other Diseases	Total.
1897	19	70	—	1	—	9	—	—	—	—	—	2	3	104
1898	211	349	12	2	2	13	—	—	—	—	—	12	10	611
1899	235	571	21	5	—	1	—	—	—	—	—	12	4	849
1900	145	638	21	6	2	6	—	—	—	—	—	6	8	832
1901	291	621	31	7	—	—	—	—	—	—	—	14	—	964
1902	160	431	16	12	—	6	—	—	—	—	—	74	12	711
1903	174	187	22	14	1	2	—	—	—	—	—	15	2	417
1904	112	155	53	13	1	3	—	—	—	—	—	317	12	666
1905	300	114	66	12	4	1	23	—	—	—	—	88	5	613
1906	214	283	72	8	2	6	76	—	8	—	—	9	7	685
1907	99	317	283	4	9	2	106	—	94	—	—	10	6	930
1908	131	508	206	14	6	9	53	—	61	—	—	16	7	1,011
1909	109	834	164	11	10	3	1	—	10	—	—	3	6	1,151
1910	148	696	267	16	12	1	27	—	5	—	—	—	15	1,187
1911	122	670	248	16	12	4	—	—	7	—	67	—	47	1,193
1912	106	888	193	11	9	5	5	13	2	—	73	—	47	1,352
1913	126	838	246	12	6	2	16	37	7	2	61	—	15	1,368
1914	108	958	361	20	11	4	11	44	7	5	27	—	13	1,569
1915	115	750	286	25	12	4	18	65	29	4	26	—	30	1,364
1916	95	1,030	251	12	16	1	16	45	17	2	—	—	14	1,499
1917	92	642	191	17	13	22	3	120	26	99	4	—	26	1,255
1918	105	313	241	13	7	29	7	93	14	236	13	—	204	1,275
1919	118	595	280	16	28	24	11	87	24	111	6	—	155	1,455
1920	59	1,128	313	33	39	10	—	107	29	124	5	—	103	1,950
1921	107	1,047	250	38	54	1	—	156	12	123	19	—	101	1,908
1922	49	1,093	234	39	56	12	—	133	12	87	11	—	184	1,910
1923	61	931	254	47	56	7	11	122	9	91	5	—	154	1,748
1924	35	878	295	36	45	38	24	138	8	80	10	—	243	1,830
	3,646	17,535	4,877	460	413	225	408	1,160	381	964	327	578	1,433	32,407

TABLE VII.—DISCHARGES SINCE OPENING OF HOSPITAL.

Year.	Enteric Fever.		Scarlet Fever.		Diphtheria		Erysipelas.		Puerperal Fever.		Measles.		Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Cerebro-Spinal Fever		Venereal Diseases.		Tinea.		Quarantine.		Other Diseases.		TOTAL.	
	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.	Recd.	Died.
1881	11	1	43	2	—	—	1	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2	1	58	5
1882	155	23	296	12	11	—	1	1	—	—	16	4	—	—	—	—	—	—	—	—	—	—	9	—	10	—	498	40
1883	201	24	536	20	15	4	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16	1	39	—	810	50
1884	134	14	592	15	16	2	5	—	—	1	7	—	—	—	—	—	—	—	—	—	—	—	6	—	25	3	785	35
1885	209	21	640	22	20	7	8	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	13	—	17	—	908	51
1886	183	27	438	20	14	2	10	1	—	—	6	—	—	—	—	—	—	—	—	—	—	—	74	—	10	—	735	50
1887	140	24	179	4	15	3	13	2	1	—	2	—	—	—	—	—	—	—	—	—	—	—	10	—	2	—	362	33
1888	88	13	171	7	44	9	12	—	1	—	1	1	—	—	—	—	—	—	—	—	—	—	316	—	31	5	664	35
1889	241	22	109	5	42	8	12	1	3	1	4	4	21	1	—	—	—	—	—	—	—	—	88	—	20	3	540	45
1890	192	19	241	4	44	11	4	2	—	1	6	—	62	13	—	—	1	5	—	—	—	—	9	—	56	2	615	57
1891	91	9	313	9	192	16	9	1	3	—	2	1	77	19	—	—	28	58	—	—	—	—	11	—	80	6	806	119
1892	107	13	425	8	170	17	12	3	3	2	9	2	55	10	—	—	21	30	—	—	—	—	16	—	40	6	858	91
1893	99	3	781	24	129	16	10	1	8	2	3	—	1	—	—	—	2	4	—	—	—	—	3	—	53	5	1,089	55
1894	117	5	678	16	226	22	13	1	5	8	7	—	28	—	—	—	1	—	—	—	—	—	—	—	52	10	1,127	62
1895	78	11	617	18	232	18	18	—	5	5	3	—	1	1	10	—	1	2	—	—	61	—	—	—	115	7	1,141	62
1896	58	10	748	22	136	15	11	—	3	5	6	—	2	2	4	—	—	1	—	—	76	—	—	—	226	5	1,270	60
1897	87	5	724	15	150	13	10	1	2	4	1	1	11	3	41	5	1	—	—	—	61	—	—	—	228	8	1,316	55
1898	75	10	833	27	228	38	15	4	9	2	2	1	5	4	37	4	1	1	—	—	27	—	—	—	205	11	1,437	102
1899	82	10	641	20	214	29	18	6	9	1	5	3	15	5	47	4	11	9	—	—	36	—	—	—	148	10	1,226	97
1900	82	10	1,017	23	214	27	13	—	8	7	1	—	6	5	63	2	3	5	—	—	—	—	—	—	84	5	1,491	84
1901	77	14	563	19	185	25	14	1	7	3	20	1	2	1	109	2	6	13	98	—	4	—	—	—	111	11	1,196	90
1902	42	15	269	11	135	18	11	4	3	3	29	7	7	2	83	10	1	4	231	—	13	—	—	—	334	35	1,158	109
1903	82	11	450	12	180	14	13	—	15	10	27	4	7	4	94	3	6	10	104	1	6	—	—	—	301	38	1,285	107
1904	39	3	985	10	191	19	24	4	25	11	16	3	—	—	103	7	1	13	124	—	5	—	—	—	259	35	1,772	105
1905	76	14	997	19	167	22	31	7	41	13	2	—	—	—	136	9	1	4	122	3	19	—	—	—	261	18	1,853	109
1906	29	3	979	18	147	31	31	5	43	14	22	6	—	—	132	10	—	4	66	4	11	—	—	—	328	37	1,788	132
1907	42	3	879	19	186	18	38	4	34	17	5	1	10	1	103	16	1	1	77	3	9	—	—	—	248	28	1,632	111
1908	21	1	818	16	189	18	27	1	35	13	39	11	20	1	111	22	—	10	54	7	10	—	—	—	360	48	1,684	148
Total	2,838	338	15,962	417	3,492	422	387	52	263	123	243	51	330	72	1,073	94	86	174	876	18	338	—	571	1	3,645	337	30,104	2,099
Mortality per cent.	10.6		2.5		10.7		11.8		31.8		17.3		17.9		8.0		66.9		2.0		—		.1		8.4		6.5	

COUNTY OF LANARK

DISTRICT OF THE LOWER WARD

REPORT

BY THE

MEDICAL OFFICER OF HEALTH

AND OF THE

SANITARY INSPECTOR

1924

Medical Officer of Health,	=	=	County Offices, Hamilton
Assistant Medical Officer of Health,	}		County Buildings,
Sanitary Inspector,		=	=	149 Ingram Street, Glasgow

STAFF

Medical Officer of Health

J. HUME PATTERSON, F.R.F.P.S.(G.), D.P.H

Assistant M.O.H. and Tuberculosis Officer

JOHN P. CRICHTON, L.R.C.P. & S., D.P.H., L.D.S.

Sanitary Inspector

W. S. BRUCE

Assistant Sanitary Inspectors

JOHN B. PHILIP

THOMAS B. POLLOCK

(Certificated Meat Inspector)

Building, Housing, and Town Planning Inspector

M. UNDERWOOD, C.E.

Nurse Health Visitors—3

Lightburn Joint-Hospital

Physician-Superintendent, - - J. S. M'LEAN GRAY, M.B., Ch.B., D.P.H

Matron, - - - - - Miss M. TOWNSEND

COUNTY OF LANARK.

DISTRICT OF THE LOWER WARD.

(Area, 24,643 Acres.)

Report by the Medical Officer of Health for the Year 1924.

Vital Statistics.

The **Population** at the Decennial Census in June, 1921, was 29,933. The estimated population for the year 1924 was 32,600. The population of the various parishes is given in Table B.

The number of *inhabited houses*, according to the Valuation Roll, amount to 6,322, and there are 16 uninhabited.

Statistical Tables.—Table A shows the birth and death-rates per thousand of the population and the infantile deaths per thousand births for the decennial periods 1891-1900, 1901-10, and 1911-20, as well as those for the years 1921, 1922, 1923, and 1924.

Table B shows the population, births, and deaths for the year in each parish and registration district, with the deaths classified according to cause.

Table C shows the deaths classified according to cause and age periods.

The **Births** registered in the District, after correction for transfers, amounted to 625—males, 316; females, 309—giving a birth-rate of 19·17 per thousand of the population, compared with 21·08 in the year 1923.

The number of *illegitimate births* registered in the District, after correction for transfers, amounted to 28—males, 9; females, 19—giving an illegitimate rate of 4·4 per hundred total births, compared to 5·2 in the year 1923.

The **Deaths** registered in the District, after correction for transfers, amounted to 331, giving a death-rate of 10·1 per thousand of the population, which is the same as in the previous year.

DEATHS IN RELATION TO AGE.—The deaths are here arranged in recognised age periods, and the percentage proportion of deaths at each age period is given :—

Infant Period, -	Under 1 year,	48 deaths or 14·5 per cent.
Under School Age, 1-5	„	30 „ 9·1 „
School Age, - 5-15	„	11 „ 3·3 „
Adolescent, - 15-25	„	14 „ 4·2 „
Early Mature Period, 25-45	„	31 „ 9·4 „
Late, - 45-65	„	77 „ 23·2 „
Post, - 65 years and upwards,	120	„ 36·3 „

DEATHS DUE TO INFECTIOUS DISEASE.—The deaths due to notifiable diseases numbered 53, made up as follows :—Diphtheria, 1; scarlet fever, 1; tuberculosis, 22 (pulmonary, 15; meningeal, 5; and other forms, 2); pneumonia (all forms), 29.

The deaths due to non-notifiable diseases amounted to 13—diarrhœa, 4; whooping-cough, 2; and measles, 7.

RESPIRATORY DISEASES.—The deaths during the year numbered 60, and the following statistics show the deaths and death-rates per 1000 of the population of the various forms for the past five years, and for the two quinquennial periods, 1911-15 and 1916-20.

Year.	Pneumonia.		Bronchitis.		Influenza.		Other Respiratory Diseases.	
	Deaths.	Death Rate.	Deaths.	Death Rate.	Deaths.	Death Rate.	Deaths.	Death Rate.
Average.								
1911-15,	45	1·10	32	0·78	3	0·06	4	0·09
Average.								
1916-20,	41	1·38	23	0·76	5	0·16	6	0·18
1920,	33	1·1	27	0·9	—	—	7	0·2
1921,	21	0·7	10	0·3	13	0·4	5	0·1
1922,	26	0·8	16	0·5	29	0·9	3	0·09
1923,	15	0·4	13	0·4	3	0·09	2	0·06
1924,	29	0·8	15	0·4	15	0·4	1	0·03

INFLUENZA.—In accordance with the method of classification adopted by the Registrar-General since 1st January, 1921, 15 deaths were ascribed to influenza. The diseases complicating these deaths were as follows :—Pneumonia, 4; cardiac failure, 4; senile cardiac failure, 4; bronchitis, 1; enteritis, 1; uncomplicated, 1.

MALIGNANT DISEASES.—Deaths falling under this heading numbered 38—males, 15; females, 23. The type of disease was—Carcinoma, 22; and other forms, 16. The disease affected some portion of the gastro-intestinal tract in 25 cases; the genito-urinary tract, 6 cases; the breast, 2 cases; others, 5.

TABLE B.—LOWER WARD.—Year 1924.—Population, Births, and Deaths (a) in each Registration District, with Deaths classified according to cause.

Registration District.	Estimated Population, 1924.	Births.	Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Erysipelas.	Other Septic Diseases.	Cerebro-Spinal Fever.	Pulmonary Tuberculosis.	Meningeal Tuberculosis.	Abdominal Tuberculosis.	Other Tuberculosis.	Malignant Diseases.	Rheumatic Fever.	Meningitis (simple).	Cerebral Hæmorrhage.	Convulsions.	Other Nervous Diseases.	Organic Heart Disease.	Bronchitis.	Pneumonia.	Laryngitis.	Other Respiratory Diseases.	Diarrhoea.	Appendicitis and Typhlitis.	All Liver Diseases (not Malignant).	Other Digestive Diseases.	Nephritis and Bright's Disease.	Puerperal Sepsis.	Dis. and Acc. of Pregnancy, &c.	Congenital Malformations.	Premature Birth.	Atrophy. Debility, and Marasmus.	Atelectasis.	Injury at Birth.	Suffocation (Overlying).	Syphilis.	Rickets.	Violence.	Suicide.	Other Defined Diseases.	Ill-Defined Diseases.	Encephalitis Lethargica.	
Shettleston, ...	9,400	106	—	4	—	—	1	3	—	—	—	5	—	—	—	7	—	—	8	—	2	8	4	6	—	—	1	—	—	—	—	2	—	—	—	1	—	—	—	—	—	4	—	12	2	—	
Springburn, ...		5	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—			
Maryhill, ...		—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Possilpark, ...		37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	4	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	2	—	—		
Garngadhill, ...	17,000	13	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	4	—	—	
Cadder, East, ...		196	—	2	—	1	—	8	—	—	—	—	4	—	—	10	—	4	5	—	2	6	6	6	—	1	1	—	—	—	2	1	—	—	1	1	3	—	—	—	—	2	—	29	—	—	
Cadder, West, ...		141	—	1	1	—	—	—	1	—	1	—	2	—	—	1	12	—	—	6	1	2	10	4	8	—	—	1	—	—	—	6	1	—	—	1	1	1	—	—	—	—	4	—	9	—	2
Carmunnock, ...	950	12	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	1	—	—	3	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	—	
Rutherglen, ...	5,250	115	—	—	—	1	—	1	—	1	—	7	1	—	1	6	—	—	7	—	1	5	1	7	—	—	—	—	—	—	—	1	—	—	2	1	4	—	—	—	—	—	2	—	5	—	—
TOTAL, ...	32,600	625	—	7	1	2	1	15	—	2	—	15	5	—	2	38	—	4	31	1	8	37	15	29	—	1	4	—	—	—	9	5	—	—	5	4	9	—	—	—	—	—	12	—	64	3	2

(a) These are the nett or adjusted deaths, having been corrected for institutions and other transfers in accordance with the Scottish Board of Health instructions.



TABLE C.—LOWER WARD.—Year 1924.—Deaths classified according to cause and age periods.

CAUSE OF DEATH.	Registered in District.	Transferred from other Districts.	Transferred to other Districts.	Nett Deaths.	NETT DEATHS AT DIFFERENT AGE PERIODS.																	
					WEEKS.				MONTHS.				YEARS.									Over 75.
					1.	2.	3.	4.	1.	3.	6.	9.	1.	5.	10.	15.	25.	35.	45.	55.	65.	
Enteric Fever, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Encephalitis Lethargica, ...	7	—	5	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles, ...	8	—	1	7	—	—	—	—	—	1	—	—	6	—	—	1	—	—	—	—	—	—
Scarlet Fever, ...	5	—	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping-Cough, ...	3	—	1	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria, ...	5	1	5	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Influenza, ...	30	2	17	15	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas, ...	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Septic Diseases, ...	1	1	—	2	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Cerebro-Spinal Fever, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis, ...	89	3	77	15	—	—	—	—	—	—	—	—	—	—	—	1	4	5	4	—	1	—
Meningeal „	5	3	3	5	—	—	—	—	—	—	1	—	2	1	—	—	—	1	—	—	—	—
Abdominal „	25	—	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Forms „	30	—	28	2	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—
Malignant Diseases, ...	36	8	6	38	—	—	—	—	—	—	—	—	1	—	—	1	2	4	5	12	8	5
Rheumatic Fever, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Meningitis (Simple), ...	4	—	—	4	—	—	—	—	—	1	1	—	2	—	—	—	—	—	—	—	—	—
Cerebral Hemorrhage, ...	31	3	3	31	—	—	—	—	—	—	1	—	—	—	—	—	—	—	2	6	12	10
Convulsions, ...	1	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
Other Nervous Diseases, ...	52	2	46	8	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	2	—	3
Organic Heart Diseases, ...	38	8	9	37	1	—	—	—	—	—	—	—	—	—	1	—	—	—	5	7	15	8
Bronchitis, ...	14	2	1	15	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	3	5	4
Pneumonia, ...	46	6	23	29	—	—	—	—	—	3	2	4	12	1	—	1	1	2	1	1	1	—
Laryngitis, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Respiratory Diseases, ...	6	—	5	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhoea (under 2 years), ...	4	1	1	4	—	—	—	—	1	2	1	—	—	—	—	—	—	—	—	—	—	—
Appendicitis and Typhilitis, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
All Liver Diseases (normal), ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Digestive Diseases, ...	9	3	3	9	—	—	—	—	—	—	1	—	1	1	—	1	—	—	1	2	2	—
Nephritis and Bright's Disease, ...	4	2	1	5	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1	—	—
Puerperal Sepsis, ...	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Dis. and Acc. of Pregnancy, &c., ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Congenital Malformations, ...	1	4	—	5	—	3	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—
Premature Birth, ...	2	2	—	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Atrophy, Debility, &c., ...	8	1	—	9	4	1	1	—	2	1	—	—	—	—	—	—	—	—	—	—	—	—
Atelectasis, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Injury at Birth, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Suffocation—Overlying, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Syphilis, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rickets, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Violence, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Suicide, ...	16	10	14	12	—	—	—	—	—	—	—	—	2	1	—	3	1	3	1	1	—	—
Other Defined Diseases, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ill-Defined Diseases, ...	102	14	52	64	2	—	—	—	1	2	—	—	1	—	—	2	1	3	6	11	10	25
	2	1	—	3	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	1
TOTAL, ...	537	77	333	331	11	4	1	1	7	10	8	6	30	8	3	14	13	18	28	49	56	64



TABLE A.—BIRTH-RATES AND DEATH-RATES PER 1,000 OF THE POPULATION.
INFANTILE DEATHS PER 1,000 BIRTHS.

Year.	Births.	Birth-rate.	Net Deaths.	Death-rate.	Infant Under 1 year	
Average.					Deaths.	Death-rate.
1891 } to 1900 }	1,200	32·9	577	15·9	150	125·2
Average.						
1901 } to 1910 }	1,576	33·4	683	14·4	174	110·8
Average.						
1911 } to 1920 }	869	24·1	428	12·2	88	98·2
1921	672	22·4	294	9·8	60	89·3
1922	643	21·2	345	11·4	48	74·6
1923	664	21·08	320	10·1	48	72·3
1924	625	19·17	331	10·1	48	76·8

*By the Glasgow Boundaries Act, 1912, an area of 1,706 acres, with a population of 28,490 was annexed by the City of Glasgow, which affected the statistics from 1st January, 1913.

Prevalence of Infectious Disease.

The diseases included under this heading are classified in relation to notification, and are divided into two groups. Group I includes diseases which are compulsorily notifiable (*a*) under the Notification Act, (*b*) by adoption under the Notification Act, and (*c*) by order of the Scottish Board of Health; and Group II not compulsorily notifiable diseases. The diseases included in these groups are as follows :—

GROUP I.

(a)	(b)	(c)
Smallpox.	August, 1906.	1st August, 1912.
Diphtheria.	Cerebro-spinal Meningitis.	Pulmonary Tuberculosis.
Scarlet Fever.	24th October, 1912.	1st July, 1914.
Typhus Fever.	Ophthalmia Neonatorum.	All forms of Tuberculosis.
Enteric Fever.	Acute Poliomyelitis.	1st August, 1919.
Puerperal Fever.	Tetanus.	Malaria.
Erysipelas.	Anthrax.	Dysentery.
	Glanders.	Trench Fever.
	Actinomycosis.	Acute Primary Pneumonia.
		Acute Influenza Pneumonia.

GROUP II.

Measles.	Mumps.	Ringworm,
German Measles.	Whooping Cough.	Scabies.
	Encephalitis Lethargica.	Chickenpox.

Table D shows the number of cases of notifiable infectious disease occurring in each parish during the year, and in the following paragraphs the prevalence and distribution of each disease is summarised.

All the outbreaks were carefully inquired into, and the usual recognised methods of investigation, isolation, and disinfection were carried out to control the spread of the disease.

TABLE D.—Number of Cases of Notifiable Infectious Diseases recognised in each Parish during 1924.

Parish.	Diphtheria.	Scarlet Fever.	Enteric Fever.	Puerperal Fever.	Erysipelas.	Ophthalmia Neonatorum.	Acute Primary Pneumonia.	Influenzal Pneumonia.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Cerebro-Spinal Meningitis.	Totals.
Glasgow (late Barony),	- 9	19	2	1	8	3	31	7	7	8	—	96
Cadder, -	- 21	66	—	2	6	3	34	13	32	19	1	196
Rutherglen,	- 5	4	—	—	2	3	18	—	18	4	—	54
Carmunnock,	- —	2	—	—	—	—	—	2	—	—	—	4
Totals, -	- 35	91	2	3	16	9	83	22	57	31	1	350

The number of visits of inquiry made by the Sanitary Inspectors and Nurse Health Visitors amounted to 1,089; intimations to parents and school teachers, 386; and 162 cases were removed to hospital. 133 apartments, 132 lots of bedding and clothing were disinfected, and 2 lots of bedding and clothing were destroyed.

In addition to the visits made to mothers and babies and to tuberculous patients, which constitute their principal duties, the Nurse Health Visitors also visit cases of certain infectious diseases, both notifiable and non-notifiable, and give advice in methods of nursing and carrying out of treatment. During the year 790 such visits were made, and the following summary shows the more important diseases for which these visits were made:—

Measles, - - -	162	Pneumonia, . - -	114
Impetigo, - - -	112	Ophthalmia Neonatorum, -	53
Whooping Cough, - -	102	Acute Poliomyelitis, - -	4
Chickenpox, - - -	48	Debility, - - -	82
Scabies. - - -	28	Other Conditions, - -	85

Smallpox.

No cases were notified during the year.

VACCINATION (SCOTLAND) ACT, 1907.—The returns received from the Registrars show that the number of statutory declarations of conscientious objection to vaccination amounted to 120, compared with 130 in the year 1923. Of this number 35 were in the registration district of Cadder West, 32 in Cadder East, 28 in Rutherglen, 16 in Shettleston, 7 in Possilpark, and 2 in Garngadhill. The proportion of declarations for the whole district was 19 per cent. of the total births.

Diphtheria.

The following tabular statement shows the cases, deaths, and respective rates in quinquennial periods since 1892, and for the years 1921, 1922, 1923, and 1924 :—

Year.	Numbers.		Rates.		
	Cases.	Deaths.	Deaths per 100 Cases.	Cases per 1000 Population.	Deaths per 10,000 Population.
Annual Average—					
1892-95,	25·2	8·2	32·6	0·75	2·47
1896-1900,	34·2	7·0	20·4	0·84	1·73
1901-05,	48·6	6·6	13·5	1·1	1·5
1906-10,	135·6	9·8	7·2	2·6	1·9
1911-15,	92·0	8·0	8·6	2·3	1·9
1916-20,	37·0	4·0	9·7	1·2	1·2
Year 1921,	62	4	6·4	2·0	1·3
1922,	56	2	3·6	1·8	0·6
1923,	36	3	8·3	1·1	0·9
1924,	35	1	2·8	1·0	0·3

33 of the cases notified were removed to hospital, 1 being isolated and nursed at home, while 1 proceeded home to Girvan before the result of the swab taken was known. Intimation of these facts was sent to the Medical Officer of Health, Girvan. One of the cases occurred in Robroyston Hospital, which institution is used by the City of Glasgow for the treatment of tuberculous patients. This case was removed to one of the City of Glasgow fever hospitals.

The monthly distribution throughout the year was as follows :—

Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
2	—	3	2	1	3	8	3	1	5	3	4

The age incidence of the cases and deaths was as follows:—

	Ages,	1	1-5	5-15	15-25	25-45
Cases,	-	-	2	9	18	3
Deaths,	-	-	—	1	—	—

It is gratifying to note the decline in the fatality rate, which was most marked about the year 1906, when diphtheria antitoxin was introduced, and that this year the fatality rate is the lowest on record. It is well known that when antitoxin has been administered in the early stages of the disease, there is every hope for a complete recovery.

The arrangements inaugurated in 1922 for a supply of antitoxin to be available to medical practitioners at the constabulary stations of the District have been taken advantage of to some extent. One practitioner has given serum to 8 suspected cases, the average dose being 8,000 units.

Scarlet Fever.

The following tabular statement shows the cases, deaths, and respective rates in quinquennial periods since 1892, and for the years 1921, 1922, 1923, and 1924:—

Year.	Cases.	Deaths.	Deaths per 100 cases.	Cases per 1000 Population.	Deaths per 10,000 Population
Annual Average—					
1892-95, -	189	9	4·6	5·6	2·6
1896-1900, -	245	10	4·0	6·0	2·4
1901-05, -	136	4	2·9	3·1	0·9
1906-10, -	224	6	2·7	4·4	1·2
1911 15, -	240	7	2·8	5·9	1·6
1916-20, -	63	1	1·2	2·1	0·2
Year 1921, -	77	—	—	2·6	—
1922, -	72	1	1·4	2·3	0·3
1923, .	99	—	—	3·1	—
1924, .	91	1	1·0	2·7	0·3

Of the 91 cases notified, 76 were removed to hospital. Eight of the cases notified occurred in Robroyston Hospital and were treated in one of the City of Glasgow fever hospitals.

The monthly distribution of the cases was as follows:—

Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
8	8	8	5	12	5	11	5	5	4	15	5

The age incidence of the cases and deaths was as follows:—

Ages—	1	1-5	5-15	15-25	25-45	45-65
Cases,	3	19	53	11	4	1
Deaths,	—	—	—	—	—	1

Enteric Fever.

The following tabular statement shows the cases, deaths, and respective rates in quinquennial periods since 1892, and for the years 1921, 1922, 1923, and 1924:—

Year.	Numbers.		Rates.		
	Cases.	Deaths.	Deaths per 100 Cases.	Cases per 1000 Population.	Deaths per 10,000 Population.
Annual Average—					
1892-95,	48	7	15.5	1.4	2.2
1896-1900,	47	6	13.0	1.1	1.5
1901-05,	40	5	13.3	0.9	1.2
1906-10,	40	3	8.4	0.8	0.6
1911-15,	10	2	19.2	0.2	0.5
1916-20,	5	0.2	3.8	0.1	0.06
Year 1921,	2	—	—	0.06	—
1922,	1	—	—	0.03	—
1923,	2	—	—	0.06	—
1924,	2	—	—	0.06	—

It is very gratifying to note that no deaths have occurred from this disease since the year 1916, and that the number of cases also shows a considerable decrease in recent years.

During the year two cases were notified. One, a school teacher, aged 35 years, was isolated and nursed at home, and the other, a schoolboy, aged 14 years, was also isolated and nursed at home. There was no connection between the two cases, and although careful inquiry was made, nothing definite to show origin of infection could be discovered.

Cerebro-Spinal Meningitis.

One boy, aged 19 years, from Cadder, was notified and removed to hospital, where he died 14 days after admission, the cause of death being stated as "encephalitis, 2 months; meningitis, 8 days."

Erysipelas.

Cases, 16; deaths, nil; removed to hospital, 5.

Of the 5 cases removed to hospital, 1 was notified from Robroyston Hospital and treated in the City of Glasgow hospitals.

Pneumonia.

Cases, 105; deaths, 29.

The cases were thus described in the notifications:—Lobar-pneumonia, 14; broncho-pneumonia, 32; pneumonia (unqualified), 32; influenzal-pneumonia, 22; primary pneumonia, 5.

The age and sex-incidence of the cases were as follows:—

	Ages—	1	1-5	5-15	15-25	25-45	45-65	65 and upwards.
Males, -	-	5	22	16	6	12	7	1
Females,	-	7	15	5	1	5	3	—

57 cases occurred during the first quarter of the year, 15 in the second, 8 in the third, and 25 in the fourth. The greatest number notified in one month was 23 in February.

With the exception of patients whose home conditions were such as to ensure suitable treatment, the cases were visited by the Nurse Health Visitors, and nursing advice and assistance given. In all, 114 visits were made to 84 cases. 46 cases were removed to hospital, compared with 22 in the previous year.

Non-Notifiable Diseases.

The sources of information available to the department regarding the prevalence of measles, whooping-cough, mumps, chickenpox, ringworm, &c., are as follows:—(1) Information sent by schoolmaster for the purposes of certification of scholars absent on account of infectious disease; (2) applications made by School Authorities for closure of schools when the attendance is interfered with by epidemic prevalence; (3) information obtained by the Nurse Health Visitors; and (4) the returns of death received from the local Registrars. The deaths due to the various non-notifiable diseases are shown in Table B.

The following tabular statement shows the deaths registered from measles and whooping-cough, and the deaths per 10,000 of the population in quinquennial periods since 1892, and for the years 1921, 1922, 1923, and 1924:—

Annual	Average.	Deaths.	Measles.	Deaths	Whooping Cough.
			Death rate per 10,000 Population.		Death-rate per 10,000 Population.
	1892-95,	17	5.2	9	2.8
	1896-1900,	25	6.2	21	5.3
	1901-05,	21	4.8	28	6.3
	1906-10,	23	4.5	27	5.4
	1911-15,	12	3.0	14	3.4
	1916-20,	6	2.0	8	2.6
Year	1921,	2	0.6	3	1.0
	1922,	11	3.6	3	0.9
	1923,	2	0.6	5	1.5
	1924,	7	2.1	2	0.6

Measles.—The number of cases brought to the notice of the Public Health Department from various sources was 174, and 11 cases were removed to hospital. Of the 11 cases removed to hospital one suffered from appendicitis and was removed to Motherwell Hospital for operation, while one case was a transfer from Calderbank Home. 145 cases were visited, and 162 visits were made by the Nurse Health Visitors, who gave advice as to the nursing of the disease and preventing the spread of infection.

Whooping-Cough.—The number of cases brought to the notice of the Public Health Department was 81. 76 cases were visited, and 102 visits were made by the Nurse Health Visitors. Two cases were removed to hospital.

The following were also treated in Lightburn Hospital:—

Impetigo,	...	...	3 cases.	Blepharitis,	..	...	1 case
Marasmus,	...	...	4 „	Debility,	...	...	1 „
Diabetes,	...	...	1 „	Pediculosis,	...	...	1 „

while one baby was admitted with mother.

In addition, 4 cases of ringworm received X-ray treatment in Motherwell.

Encephalitis Lethargica.—Six cases were treated in hospital. In one case the patient died after 6 days' residence, the diagnosis being altered to cerebellar hæmorrhage. In two instances the diagnosis was altered to intestinal stasis.

Schools.

No certificates for the closure of schools were given during the year. Owing to the prevalence of infectious disease in certain areas, it was found necessary to make several visits to schools for the purpose of examining scholars. In some instances children were excluded from school, and all necessary steps were taken to prevent the spread of infection.

Anthrax.

Five outbreaks of this disease in cattle were reported during the year, 4 in the Parish of Cadder, and 1 in the Parish of Carmunnock. None of the persons in contact with the diseased animals was infected.

Foot and Mouth Disease.

There were two outbreaks of this disease amongst cattle, 1 in the Parish of Glasgow, and 1 in the Parish of Rutherglen. None of the persons in contact with the diseased animals was infected.

Venereal Diseases.

A joint scheme, including County Districts and the Burghs in the County, has been in operation since 1921, a whole-time V.D. Executive Officer being in charge. Patients receive outdoor treatment at the Centre at Lightburn Joint Hospital and any cases requiring residential treatment at the County Hospital, Motherwell. As the Centres in the city of Glasgow are convenient to the area some patients also attend there.

BACTERIOLOGICAL EXAMINATION.—During the year, 57 specimens of blood was sent to the Laboratory for examination. 18 of these were from the Lightburn Hospital treatment centre, and 39 from medical practitioners (including 5 from medical officers of institutions), 14 of the specimens were positive and 43 negative.

Hospitals.

The Annual Report by the Physician Superintendent of Lightburn Joint Hospital will be found at page 439.

In addition to the cases treated in Lightburn Joint Hospital, the following cases were treated in institutions within the city of Glasgow and in Motherwell:—

Scarlet Fever,	-	-	-	2 cases in Ruchill Hospital.
„	-	-	-	1 case in Belvidere Hospital.
(a) Diphtheria,	-	-	-	1 case in Motherwell Hospital.
(b) Pneumonia,	-	-	-	2 cases in Eastern District Hospital.

(a) This case was diagnosed in Calderbank Home and transferred to Motherwell.

(b) From Barlinnie Prison.

Although situated in the Lower Ward area, Robroyston Hospital is a large institution belonging to the Corporation of Glasgow, and, naturally, any cases of acute infectious disease occurring there are treated in their own fever hospitals. The following cases occurred during the year:—Diphtheria, 1; scarlet fever, 8; erysipelas, 1.

Tuberculosis.

The provision of institutional treatment for tuberculosis was commenced in 1905, and notification was then arranged for on a voluntary basis. In the year 1907, pulmonary tuberculosis was made compulsorily notifiable in this district under the Notification Act, but was not made compulsorily notifiable throughout Scotland until 1st August, 1912. On 1st July, 1914, non-pulmonary tuberculosis was also made compulsorily notifiable throughout Scotland.

The following tabular statement shows a marked decline in the deaths from tuberculosis since the commencement of County administration, but owing to the annexations which have taken place, it is not desirable to place too much reliance on these figures for the purpose of comparison, as the composition of the population, especially the proportion of urban to rural, has changed considerably.

	Pulmonary.			Non-Pulmonary.		
	Cases Notified.	Deaths Registered.	Death-rate per 10,000 Population.	Cases Notified.	Deaths Registered.	Death-rate per 10,000 Population.
Annual Average.						
1891-95,	—	42	12·8	—	29	7·1
1896-1900,	—	47	11·7	—	29	6·8
1901-05,	—	54	12·4	—	33	7·2
1906-10,	65	57	11·3	—	41	7·6
1911-15,	59	28	6·8	—	24	5·8
1916-20,	42	22	7·3	31	11	3·5
Year 1921,	46	12	4·0	30	8	2·7
1922,	42	22	7·3	34	11	3·6
1923,	45	26	8·2	41	8	2·5
1924,	57	15	4·6	31	7	2·1

PULMONARY.

MORTALITY.—The deaths from pulmonary tuberculosis amounted to 15, giving a death-rate of 0·4 per thousand of the population. The deaths will be found classified according to Parish in Table B, and the age incidence will be found in Table C.

DEATHS IN RELATION TO NOTIFICATION.—Of the 15 deaths registered, 14 were notified cases, the remaining death, which occurred outwith the Lower Ward, being transferred into the District.

Of the 17 notified cases, 1 was notified in 1916, 2 in 1922, 3 in 1923, and 11 in 1924. No less than 11 of the cases died within 6 months of notification, viz., 2 within a week, 6 within three months, 3 within six months, and 2 were notified after death, 1 death was ascribed to general tuberculosis and is included in the non-pulmonary figures, while 1 death of a temporary resident was transferred to Leeds.

NOTIFICATION.—The number of cases notified amounted to 57, and were classified as follows:—Definite (sputum not examined), 19; definite (sputum positive), 11; definite (sputum negative), 2; suspect for observation, 12; altered diagnosis, 9; temporary resident, 2; and not visited, 2.

The age incidence of the cases notified was as follows:—

Ages,	-	5	5-15	15-25	25-45	45-65	Total
Cases,	-	4	21	9	20	3	57

The *occupations* of the cases notified were:—Scholars, 20; housewives, 8; domestic servants, 3; ironworker, 1; storekeeper, 1; coal miner, 1; mechanic, 1; engineer, 1; railwayman, 1; ex-soldier, 1; policeman, 1; labourer, 1; pedlar, 1; solicitor, 1; lecturer, 1; office boy, 1; nurse, 1; seamstress, 1; no occupation, 9; and not stated, 2.

HOUSING CONDITIONS OF THE CASES NOTIFIED.—19 of the cases lived in houses of one-apartment, 22 in two-apartment houses, 4 in three-apartment houses, 2 in four-apartment houses, 8 in houses of more than four apartments, and 2 in institutions.

TOTAL CASES ON RECORD.—At the beginning of the year there were 90 cases on the register, and during the year 57 new cases were notified, making a total of 147 cases dealt with. Of the total dealt with, 18 died (15 from pulmonary tuberculosis, 1 from other causes, 1 is included in the non-pulmonary deaths, while 1 death was transferred to the patient's usual residence in England), 11 left the district; in 2 instances the diagnosis was altered, in 1 case the name was removed from the register as the disease was arrested; 3 cases were removed as there were no signs of active tuberculosis, and 11 names were removed as they proved to be non-tubercular. At the close of the year 101 cases remained on the register.

REVISED DIAGNOSIS.—As stated above, the diagnosis of pulmonary tuberculosis was altered in two instances, in one to chronic bronchitis and emphysema, and in the other to chronic bronchitis and asthma.

ARREST OR CURE OF THE DISEASE.—The case whose name was removed from the register for this reason was notified in 1921.

NO SIGNS OF ACTIVE DISEASE.—The 3 cases whose names were removed from the register for this reason were notified as follows:—1 in 1919; and 2 in 1924.

PROVED NON-TUBERCULAR.—Of the 11 cases whose names were removed from the register for this reason, 1 was notified in 1913, 2 in 1920, 1 in 1923, and 6 in 1924.

NON-PULMONARY.

MORTALITY.—The deaths from non-pulmonary tuberculosis amounted to 7 (5 meningeal and 2 other tuberculosis) giving a death-rate of 0·21 per thousand of the population. The deaths will be found, classified according to parish, in Table B, and the age incidence will be found in Table C.

Of the 7 deaths registered, 4 were not notified cases, while 1 was on the pulmonary list.

NOTIFICATION.—The number of cases notified amounted to 31, and were classified as follows:—Glandular, 12; osseous or arthritic (including 2 spinal and 1 of hip-joint disease), 5; *abdominal, 8; meningeal, 3; generalised, 2; dermal, 1.

The age incidence of the cases notified was as follows:—

Ages, -	-5	5-15	15-25	25-45	Total.
Glandular.	2	6	2	1	11
Abdominal,	3	3	1	1	8
Other Forms,	5	3	3	1	12

TOTAL CASES ON RECORD.—At the beginning of the year there were 106 cases on the register, and during the year 31 new cases were notified, making a total of 137 cases dealt with. Of the total cases dealt with, 3 died; 11 left the District; in 1 case the diagnosis was altered; and in 2 cases the names were removed from the register as the disease was cured or permanently arrested, while 4 cases were removed from the register as they proved to be non-tubercular. At the close of the year 116 cases remained on the register.

REVISED DIAGNOSIS.—Excluding patients who died, the diagnosis was altered in 1 instance to epilepsy.

ARREST OR CURE OF THE DISEASE.—The cases removed from the register were notified in 1922.

DOMICILIARY TREATMENT.—Cases of tuberculosis suitable for treatment at home are supervised by the Tuberculosis Officer and by the Nurse Health Visitors. The visits made by the latter during the year numbered 1,452, 704 being to pulmonary and 748 to non-pulmonary cases. In addition, a considerable number of patients attended the Child Welfare Centres and the Public Health Offices in Glasgow, and 314 attendances were made at Cambuslang Dispensary.

* One of these Cases was also notified as suffering from pulmonary tuberculosis.

One shelter was in use throughout the year.

31 cases received additional nourishment in the form of milk, eggs, and butcher meat. Malt, cod-liver oil emulsion, virol, and chemical food were also supplied to suitable cases.

Sanatoria.

Pavilion VI at Lightburn Joint Hospital is set aside for the treatment of tuberculosis cases from the Lower Ward area. In addition to this, cases are also treated at the various Middle Ward sanatoria, and the following table shows the number of patients in the various institutions during the year. The letter P.=pulmonary, and N.P.=non-pulmonary :—

Institution.		Remaining end of 1923.	Admitted during 1924.	Discharged during 1924.	Died during 1924.	Remaining end of 1924.
Lightburn,	{ P.	9	52	47	4	10
	{ N.P.	8	23	24	2	5
Stonehouse,	N.P.	1	1	1	—	1
Hairmyres,	{ P.	4	3	4	—	3
	{ N.P.	1	—	—	—	1
Totals,		23	79	76	6	20

The duration of residence in hospital of the cases dismissed in 1924 was as follows :—

	Months—1-3	3-6	6-9	9-12	12 and over.
Pulmonary, -	39	13	—	—	2
Non-Pulmonary, -	14	10	1	—	2

Bovine Tuberculosis.

The observation and investigation of bovine tuberculosis, especially in dairy stock, has since the year 1904 been the subject of veterinary inspection, and the detailed result of the work in the Lower Ward is here given.

VETERINARY INSPECTION OF DAIRY HERDS.—As on former occasions samples of milk were drawn from all udders, which, upon examination, showed conditions suspicious of tubercle. In this way 3 samples of milk were taken and sent to the bacteriological laboratory, where, after examination, 2 were found to contain tubercle bacilli.

In all positive cases certificates are granted by the County Veterinary Surgeon stating that the animal suffers from tubercle of the udder.

The procedure followed is for the Medical Officer of Health to send a notice to the owner of the animal directing his attention to the requirements of the Milk and Dairies (Amendment) Act, 1922, and special attention is directed to Section 5 of the Act.

At the same time it is suggested that the animal should be sent for slaughter, and the owner is requested to communicate with the Public Health Department advising as to how and when it is intended to dispose of the animal. This information is sometimes forthcoming, but in some cases it is necessary to send reminders.

In both instances in which a sample of milk was found to contain tubercle bacilli the cows were sent for slaughter.

Cows with abnormal conditions of the udder other than tubercle were also recorded, and the results are as shown in the following table :—

TABLE SHOWING RESULTS OF VETERINARY INSPECTION.

Parish.	Herds.	Cows.	Samples of Milk.	Cows with Abnormal Conditions of Udder.									
				Suspected Tubercle.		Result.		Tubercle.	Atrophy.	Mammitis.	Induration N.T.	Eruption of Teats.	Total.
				Smear.	Biological.	+	-						
Cadder,	33	823	2	1	1	1	1	2	28	2	7	12	51
Barony,	12	221	1	1	—	1	—	1	10	2	1	—	14
Carmunnock,	5	180	—	—	—	—	—	—	9	2	10	—	21
Rutherglen,	5	72	—	—	—	—	—	—	6	—	1	—	7
Total,	-	55 1,296	3	2	1	2	1	3	53	6	19	12	93

The routine inspections of dairy herds were suspended until May, owing to the presence of foot-and-mouth disease.

Refractories Industries (Silicosis) Scheme, 1919.

The periodic examination was carried out at the end of the second year. All the workers examined on this occasion were examined two years ago. The standard of health is extremely good. One male worker has ceased employment at these works, while another has gone to another department and does not require further examination.

MATERNITY AND CHILD WELFARE.

The number of *births* registered, corrected for transfers, was 625, the birth-rate for the year being 19·17 per thousand of the population. Of the 625, 28 were illegitimate.

Notifications.—Practically all the births registered in the district were notified, and, in addition, 22 still-births were reported.

Table E shows the births registered, births notified, visits made by the Nurse Health Visitors, the attendant at confinement as ascertained at the first visit, infant deaths registered, and the infantile death-rate, the information being tabulated according to registration districts.

Infantile Mortality.—The deaths of infants under 1 year numbered 48, giving an infant mortality-rate of 76·8 per thousand births, as compared with 72·3 in the previous year.

Of the deaths, 17, or 35·4 per cent., were due to developmental causes, which include prematurity, convulsions, atrophy, &c. Of these 17 deaths, 13, or 76 per cent., occurred during the first four weeks of life.

Table F shows the deaths arranged according to certain group causes and age periods.

Maternal Morbidity and Mortality.—For some years careful inquiry has been made into all deaths that occur within four weeks of confinement, with a view to ascertaining the causes of these deaths, and considering what steps should be taken to prevent them. No such deaths took place during the year.

Puerperal Fever.—3 cases were notified and removed to hospital. In 2 instances a doctor was in attendance at the birth, and in 1 a midwife.

Still-births.—Special visits of inquiry were made, and the records of 22 cases showed that the following conditions were noted as the probable cause:—

(a) *Affecting the Mother.*—Shock due to accidents, 6; albuminuria, 1.

(b) *Affecting the Child.*—Prolonged labour, 5; strangulation, 4; abnormal presentation, 1.

(c) In 5 cases there was no known probable cause.

TABLE E.—Lower Ward District.

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	Births.		Notified Alive, Stillborn.	Number of Visits.			Total.	Attendant at Confinement.		Infant Deaths. Rate per 1000 Births.	
	Registered.	...		First.	Subsequent.	Special.		Doctor.	Midwife.		
Glasgow (late Barony),	161	154	4	147	932	43	1,122	60	87	13	27.0
Cadder, ...	337	313	11	315	1,983	75	2,373	199	116	19	39.5
Rutherglen,	115	96	7	106	991	69	1,166	34	72	15	31.5
Carmunnock,	12	7	—	7	32	5	44	7	—	1	2.0
<hr/>											
TOTAL, ...	625	570	22	575	3,938	192	4,705	300	275	48	100.0

Table F.—Lower Ward District.

CAUSE OF DEATH.	AGE PERIODS.									
	WEEKS.					MONTHS.				Total.
	-1	-2	-3	-4	Total	1-3	-6	-9	-12	1 yr.
1. Prematurity, - -	4	—	—	—	4	—	—	—	—	4
Congenital Malforma- tions, - -	—	3	—	—	3	1	—	—	—	4
Atelectasis, - -	—	—	—	—	—	—	—	—	—	—
Injury at Birth, - -	—	—	—	—	—	—	—	—	—	—
2. Atrophy, Debility, and Marasmus, - -	4	1	1	—	6	2	1	—	—	9
3. Diarrhœa, - -	—	—	—	—	—	1	2	1	—	4
Other Digestive Diseases, - -	—	—	—	—	—	—	—	1	—	1
4. Pneumonia, - -	—	—	—	—	—	—	3	2	4	9
Bronchitis, - -	—	—	—	—	—	1	—	1	—	2
Other Respiratory Diseases, - -	—	—	—	—	—	—	—	—	—	—
5. Tuberculosis— Pulmonary, - -	—	—	—	—	—	—	—	—	—	—
Meningeal, - -	—	—	—	—	—	—	—	1	—	1
Abdominal, - -	—	—	—	—	—	—	—	—	—	—
Others, - -	—	—	—	—	—	—	—	—	1	1
6. Convulsions, - -	—	—	—	—	—	—	—	—	1	1
Meningitis, - -	—	—	—	—	—	—	1	1	—	2
Other Nervous Diseases, - -	—	—	—	—	—	—	—	—	—	—
7. Measles, - -	—	—	—	—	—	—	1	—	—	1
Whooping Cough, - -	—	—	—	1	1	—	—	—	—	1
Diphtheria, - -	—	—	—	—	—	—	—	—	—	—
Scarlet Fever, - -	—	—	—	—	—	—	—	—	—	—
8. Syphilis, - -	—	—	—	—	—	—	—	—	—	—
9. Violence, - -	—	—	—	—	—	—	—	—	—	—
10. All other causes, - -	3	—	—	—	3	2	2	1	—	8
	11	4	1	1	17	7	10	8	6	48

In 6 instances the fœtus was stated to be macerated; in 1 abnormal in appearance; and in 15 normal in appearance.

In 10 instances the confinement was normal; in 6, prolonged and difficult; in 3, forceps were used; 1 was an induction of labour on account of albuminuria; 1 a cæsarean section, while 1 was a premature birth at 7th month, probably due to mother's health.

In one instance the mother was employed as a mill worker, while the remainder attended to their household duties.

In 7 cases the still-birth was the first pregnancy; in 2 the second; in 2 the third; in 2 the fourth; in 1 the fifth; in 3 the seventh; in 4 the eighth; and in 1 the ninth.

In 5 instances a doctor alone was present at the confinement; in 7, a doctor and a midwife; in 5, a midwife alone; in 2, a doctor and a handywoman; and in 3 the confinement took place in an institution.

Ophthalmia Neonatorum.—10 cases were notified, 2 being notified by doctors, 6 by midwives, and 2 by health visitors. In 4 instances a doctor attended at the confinement, and in 6, a midwife. No case was due to gonococcal infection, the bacteriological examination showing in each case that other bacteria was the cause of the ophthalmia.

Necessitous Cases.—The following scale of assistance to necessitous cases in ill-health was in operation during the year. Children under 2 years of age, nursing mothers, and expectant mothers—1 pint of milk daily. The amount of assistance granted was governed by the following standards:—Where the weekly income per adult (children under 14 years of age counting as half adults) was less than 7s., full assistance was given; if from 7s. to 8s. 6d. per adult, half assistance; if over 8s. 6d., no assistance.

Forms showing the home and financial circumstances of the applicants are in use. These have proved of great assistance in checking the statements.

Throughout the year 128 families were granted assistance, at an estimated cost of £165, compared with 145 at an estimated cost of £225 last year.

Child Welfare Centres.—The work of the Centres is still increasing owing to the continued unemployment. It is again a pleasure to acknowledge the voluntary assistance of the lady members of the two Child Welfare Associations, and to know that their work is still being

carried on. The following tabular statement shows the work carried out at the Centres:—

	Year.	Mothers.	Children.	Consultations.	Lectures.	Demonstrations.
Chryston,	1919,	1,123	609	210	10	36
	1920,	1,677	1,267	443	10	38
	1921,	1,413	958	303	7	29
	1922,	1,851	1,358	487	10	33
	1923,	1,747	1,596	430	11	37
	1924,	1,516	1,346	353	10	38
Bishopbriggs,	1919,	1,260	926	282	10	38
	1920,	1,746	1,321	438	9	39
	1921,	1,688	1,041	379	7	30
	1922,	2,225	1,427	526	10	31
	1923,	2,128	1,745	487	10	37
	1924,	2,374	1,892	601	10	38
Cambuslang,	1925,	403	339	233	—	—

Visitation.—The number of visits made by the three Nurse Health Visitors was 4,705, of which 575 were first visits, 3,938 revisits, and 192 special visits. These figures, of course, do not include the visits made by nurses to cases of infectious and contagious diseases, which are referred to on page 380, and for the purpose of comparison with previous years, they should be read in conjunction with the paragraph on Necessitous Cases.

Hospital Admissions.—The Middle Ward Hospital at Bellshill and Convalescent Home at Calderbank continued to grant facilities for the treatment of suitable cases.

30 mothers and 1 baby were treated in Bellshill, and the conditions requiring removal were thus described:—Difficult confinement, 10; unsuitable home, 8; hæmorrhage, 3; eclampsia, 2; threatened abortion, 1; placenta prævia, 1; perineorrhaphy, 1; persistent occipito posterior, 1; varicose veins, 1; ante-natal treatment, 1; and 1 for observation and diagnosis. The baby was admitted with mother and died in hospital.

19 mothers, 7 babies, and 6 children were treated in Calderbank Home. All the mothers suffered from debility during pregnancy, following confinement, or after an operation. They were all in

necessitous circumstances and could not provide themselves with the rest they required. The results were excellent.

Of the 6 children treated in Calderbank Home, 3 were suffering from rickets (1 of whom died), 2 from debility, while 1 was admitted during the absence of the mother in hospital. 1 case developed diphtheria and died in hospital.

Two mothers, 1 suffering from thrombosis and 1 from debility, were treated in Blantyre Hospital, while 1 baby was admitted with mother.

Five mothers were admitted to the ante-natal wards in the Royal Maternity Hospital, Glasgow. Two of these cases were admitted for treatment, 1 on account of a previous difficult labour, 1 was a threatened eclampsia, and 1 a malpresentation.

In addition, 8 mothers from the district were admitted while in labour, all going in of their own accord.

GENERAL SANITATION.

Housing.

Details regarding the State-aided Housing Schemes are given in the report of the Sanitary Inspector, which contains a table showing that 466 houses have been erected under these schemes. The rentals for these houses are too heavy for quite a number of the population, and have, therefore, not helped in solving the problem of overcrowding. The District Committee, therefore, approached the Board of Health for permission to erect 1,000 two-apartment houses, with bathroom, scullery, and other necessary conveniences which could be let at a small rental, and, after negotiating with the Board, it was agreed to erect 1,000 houses in two stages, 600 being two apartments and 400 three apartments.

Housing Amenities in Mining Areas. — A circular was received from the Secretary for Scotland, suggesting that the Local Authority should cause inquiry to be made as to the conditions obtaining in mining areas regarding the provision of roads and footpaths, sanitary conveniences, and arrangements for removal of household refuse, and thereafter consider what steps should be taken to remedy any defects. This matter was remitted to the Medical Officer and Sanitary Inspector, with the instruction that their report should not be confined to mining areas, but should be made a general report.

In accordance with this instruction, the following report was submitted to the Public Health Committee:—

Along with the Sanitary Inspector, I have carefully considered the instructions by the Public Health Committee regarding amenities in mining and other populous areas, and beg to report that there is only one real mining area in the district, namely, Auchengeich, where the houses are of recent construction. They are provided with modern sanitary conveniences and kitchen sinks in the dwellings. Roads and footpaths are in good order, scavenging arrangements are carried out by the Company.

The five miners' rows owned by the Carron Company are of ancient construction, and have been condemned as unfit for human habitation. The mines have now ceased working, but the houses are still occupied. Meanwhile the midden privies, roads, and footpaths are scavenged regularly by the Company.

There are four rows of old houses at Eastfield, Cambuslang, which were formerly occupied by miners. These houses are supplied with water-closets, and scavenging is carried out regularly.

The other populous places within the Lower Ward District are all situated in Scavenging and Drainage Districts, with the following exceptions :—

Garnkirk Rows and Heathfield Square.—These houses will be demolished as soon as other houses are available.

Gartcosh is within a Special Drainage District ; most of the houses have water-closets, and scavenging is carried out by Messrs. Smith & M'Lean, who own practically the whole village.

The villages of Mollinsburn and Garnqueen are outwith Special Scavenging Districts, and scavenging is attended to by the proprietors.

The number of plans lodged and approved under the BUILDING BY-LAWS will be found in the report by the Sanitary Inspector.

Water Supply.

The *Public Supplies* were satisfactory and adequate, and several extensions carried out are dealt with by the Sanitary Inspector.

Drainage and Sewage Disposal.

Westthorn Sewage Purification Works. — Reference was made in last year's report to the unsatisfactory sewage effluent from these works causing pollution of the River Clyde, and the following joint-report was prepared by the officials of the Lower and Middle Ward District Committees and the Corporation of Glasgow :—

TO THE JOINT COMMITTEE OF LOCAL AUTHORITIES INTERESTED IN
WESTTHORN SEWAGE WORKS.

REPORT by Officials of the Local Authorities interested in the Westthorn Sewage Works, in terms of the remit made to them at the Joint Conference, held in the Municipal Buildings on Friday, 30th November, 1923.

Your Reporters have given their careful consideration to the question of altering and adapting the Westthorn Sewage Works to activated-sludge methods of Sewage Treatment, and beg leave to submit the following report :—

The Works at present deal with the sewage from a population of 19,029.

The dry weather flow as gauged is 1,200,000 gallons per day, equal to a rate of 63 gallons per head of the population per day.

There are only three public works within the drainage district, viz., a pottery, a rope work, and a shrink work, but the discharge from these works is limited, and the sewage discharging into the sewage works is practically domestic sewage.

The sewage tanks at Westthorn, of which there are three, have a total capacity of 460,000 gallons, and the separators, of which there are four, have a total capacity of 44,000 gallons.

Taking into account the particular form and dimensions of the existing works and especially the depth of the sewage tanks, your reporters have come to the conclusion that these works can be more effectively and economically adapted to air diffusion than to any of the forms of mechanical agitation in use.

Before coming to this decision the Ames Crosta Sanitary Engineering Company were asked to submit offers for their plant for mechanical agitation, but their scheme involved either the entire scrapping of the existing tanks and the construction of deep tanks, or alternatively the pumping of the sewage to a higher level and the raising of the levels of the tanks. As either alternative would add materially to the cost, both of works and of plant, and as the site and subsoil is of such a nature that deep tanks would involve some risk the scheme of aeration by mechanical agitation was dropped.

Two of the three sewage tanks would give an effective capacity of 300,000 gallons at 7 feet of average depth. This capacity would give six hours' aeration, with a daily flow of 1,200,000 gallons per day, and your Reporters are satisfied that this period of treatment will be sufficient for the Tollcross Sewage.

The remaining tank would be retained as a stand-by for future extension.

The four separators with pyramidal bases are generally of the form most suitable for settlement tanks, and can be utilised as such, but the capacity requires to be increased, and it is proposed to construct new settlement tanks with a total additional capacity of 88,750, making the total capacity of settlement tanks 132,750 gallons.

Sludge pits with a total capacity of 7,500 cubic feet are already available at the works, and there is ample room for additional sludge pits.

There are considerable areas of arable land in the immediate vicinity of the works on which the surplus sludge can with advantage be utilised. Within the fence line alone there is an area of $4\frac{1}{2}$ acres available for sludge disposal, and no difficulty is anticipated in getting rid of accumulations of surplus sludge.

It is proposed to make provision for a considerable increase in the dry-weather flow of sewage. Taking the population at 19,029 and the water consumpt at 40 gallons per head per day, the dry-weather flow would be estimated at 761,160 gallons per day, and deducting this from the gauged flow of 1,200,000 gallons per day, infiltration of subsoil water would appear to be about 438,840 gallons per day. Infiltration may or may not be cured by the proposed reconstruction of the outfall sewer hereinafter mentioned, but in either case it is justifiable to deal with a dry weather sewage flow of 800,000 gallons per day. Allowing six hours' aeration a tank capacity of 300,000 gallons equipped with aerating plant would be capable of treating a sewage flow of 1,200,000 gallons per day, or 50 per cent. more than the present dry weather flow; and in addition there is a third tank available for equipment which would be kept meantime intact.

Seven to eight years ago, the works were affected by the operations of the Farne Coal Company, who removed some of the old stoops during the war, when coal was scarce and dear. These operations came to an end some years ago, and the surface movement has now practically ceased, but the works will require repairs, and a sum for repairs has been allowed in the estimate.

The estimated cost of the necessary repairs and additions to the works, including a power house, but exclusive of plant and machinery, amounts to £5,034.

Your Reporters have obtained from Activated Sludge Limited an estimate for equipping the works with complete plant for treatment by air diffusion. A copy of that Company's estimate is appended hereto, and amounts to £5,420.

The estimate includes duplicate oil engines and air compressors, so that a breakdown in one set would not interrupt treatment, and your Reporters consider that this precautionary measure is advisable.

Current for power is not available from the Glasgow Electricity Station as the Westthorn Works are outwith the Glasgow limits of supply.

For some years past it has been apparent that the outfall sewer, as well as the Sewage Works, has been affected by underground workings, with the result that surface water from the Tollcross Burn, and probably subsoil water, as well, gets access to the sewer. This, it is believed, accounts for the large dry weather flow before mentioned; and your Reporters are of opinion that simultaneously with the alterations at the Sewage Works steps should be taken to restore the outfall sewer to its original level and gradient and make it waterproof.

The estimated cost of making good the outfall sewer amounts to £4,000, including a sum for improving the Road of Access.

The following statements are appended hereto:—

- (1) Estimates of Capital Expenditure;
- (2) Estimates of Annual Expenditure; and
- (3) Statement of Population and Assessable Valuation;

and from these it has been computed that the scheme as above described will involve an assessment of 4d. per £, which, added to the present rate of 5d. per £, would make the total drainage and sewage purification rates 9d. per £ within the area served by the works.

Reported by—

W. S. TENNANT.
F. W. HARRIS.
T. SOMERS.
JOHN T. WILSON.
W. L. DOUGLASS.
JOHN A. WARREN.

21st May, 1924.

ESTIMATE OF CAPITAL EXPENDITURE.

Adapting Existing Works, including Repairs and Alterations and Additional Settlement Tanks, - - - -	£5,034
Plant, as specified in offer of Activated Sludge Limited, -	5,420
Reconstruction of 3 feet by 2 feet egg-shaped brick outfall sewer, - - - - -	4,000
	<hr/>
	£14,450
Contingencies, 10 per cent., - -	2,890
	<hr/>
	<u>£17,340</u>

ESTIMATE OF ANNUAL EXPENDITURE.

Fuel Oil taken at 5d. per gallon and .6 pint per H.P. per hour, - - - - -	£274
Lubricating Oil, - - - - - say	30
Wages—	
1 man at £4 per week.	
2 men at £2 10s. per week.	
Total, £9 per week, - - - -	468
Stores and Replacements, - - - - -	28
	<hr/>
	<u>£800</u>

Note.—This is exclusive of interest and sinking fund instalments on Capital Expenditure.

STATEMENT OF POPULATION AND ASSESSABLE VALUATION.

	Population.	Valuation.
In City Area, - - - -	17,089	£86,316
In Middle Ward Area, - -	1,550	13,068
In Lower Ward Area, - -	390	5,153
	<hr/>	<hr/>
	19,029	£104,537
	<hr/>	<hr/>

The recommendations in this report were approved of, and it was agreed that the work should be proceeded with.

Bishopbriggs and Auchinairn.—The construction of new works on the activated-sludge principle is proceeding, and the area has been enlarged to include Jellyhill, &c.

Steps.—The adoption of activated-sludge methods of purification for this district was considered, but the Engineers reported that the sewage yield was too limited to allow of this method being economically

carried out. They reported, however, that the sewage tanks were too small for efficient tank treatment, and recommended that the capacity of the tanks should be increased by 5,525 gallons and the installation of a "Fiddian" Distributor.

These suggestions were agreed to by the Committee, and the work is being carried out during the current year.

Special Districts.

The usual table showing the Special Districts in the Lower Ward for the purposes of water supply, drainage and sewage disposal, scavenging, and lighting will be found in the report by the Sanitary Inspector.

Dairies.

The Veterinary Inspection of Dairy Herds carried out by the County Veterinary Inspector is dealt with under the heading, "Bovine Tuberculosis," in an earlier portion of this report.

Offensive Businesses.

The various offensive businesses have been carried on in a satisfactory manner, and no complaints have been received.

An application was received during the year from Messrs Kelvin Soaps, Limited, to establish a business of soap manufacturer and boiler in premises situated at Dryfield, near Kirkintilloch, and a licence was granted, subject to the following conditions:—

- (1) That no rendering of tallow, fats, oils, or other materials shall be carried on in the aforesaid premises, and that only the business of soap manufacturer and boiler shall be carried on therein.
- (2) That only pure oils and fats or other materials in fresh condition shall be brought on to the premises and used in the process of manufacture.
- (3) That the oils and fats or other materials used in the process of manufacture will not be heated beyond a temperature of 200° Fahrenheit, nor otherwise treated in such a way as to give rise to offensive odours or conditions.
- (4) That no nuisance will be caused or offensive smells emitted from the works or the processes carried on therein.
- (5) That it is an express condition of this Order, without which it would not have been made, that it shall be revoked by us should it at any time be found by us that the business is the cause of offensive conditions.

An application was received for sanction to establish the business of gut and tripe cleaner in premises at Carntynehill Road, the business to be carried on in conjunction with the tallow-melting business there.

The premises were inspected, and were found to be in every way satisfactory for the carrying on of such a business. Sanction was therefore granted early in 1925 for the establishing of the business.

An application was also received for sanction to establish the business of manufacturer of edible fat, bone boiler, and manure manufacturer (bone-grinding), and tallow melter in premises situated on the east side of Carntynehill Road. Sanction was also granted to the establishing of this business, with a proviso stipulating that no bones or other material be stored in the store-house, except on Saturdays and Sundays, and, after the removal of such on Monday mornings, the whole storeroom to be thoroughly cleansed.

The **Sale of Food and Drugs Acts** and the **Rivers Pollution Prevention Acts** are administered by the County Council, and details of the work done during the year will be found in the County Report.

COUNTY OF LANARK.

DISTRICT OF THE LOWER WARD

(AREA, 24,643 ACRES).

Report by the Sanitary InspectorFOR THE YEAR 1924.

HOUSING.

Under this heading in my Report for the year 1923, special reference was made to the unsatisfactory conditions prevailing in several localities throughout the District, on account of the insanitary and uninhabitable state of some 780 houses of one and two apartments, occupied by a working class population, and to the extent of overcrowding occurring in many of the houses, as also to the urgent need for the provision of a type of house suitable to the requirements and financial circumstances of the class referred to, and now at the close of the year 1924, I regret having to record that the conditions continue to become worse as time elapses, with the consequent increasing menace to the health of many of the people living under such conditions as have been recorded.

In order to remedy the existing conditions and to provide suitable accommodation for the majority of the families occupying those small houses, it is the considered opinion of the District Committee, and their officials that good-sized two-apartment houses with bathroom, scullery, and other necessary conveniences is what is required, and negotiations have been in progress between the District Committee and the Scottish Board of Health regarding a scheme for the provision of such houses, but until recently the Board adhered to their decision not to allow more than 25 per cent. of any scheme suggested to be of two apartments, and, as a consequence, the Committee agreed that they could not proceed with a housing scheme under such conditions,

and instructed the Clerk to reply to the Board to that effect and urging the Board to allow the Committee to proceed with the improvement of the housing conditions by the erection of 1,000 two-apartment houses in the localities where they are required.

In response to this appeal the Board invited representatives of the District Committee to attend a meeting with the Board on 28th November to discuss the Committee's proposals. This meeting, at which the present Under-Secretary for Scotland was present, was attended by the Chairman of the District Committee, the Convener of the Housing Committee, and the District Clerk. The matter was fully discussed in all its bearings, and, finally, the Committee's representatives continuing to press for full recognition of the Committee's scheme, the Under-Secretary stated that he would do his best to get the Secretary for Scotland to sanction a scheme of 1,000 houses in two stages of 500, in which the two-apartment houses would be 60 per cent. and the three-apartments 40 per cent., and that in the first instalment of 500 the 300 two-apartment houses might be erected before the 200 three-apartment houses, and further stated that the Committee must make up their minds either to accept this proposal or reject it.

The District Committee, on the recommendation of their representatives who attended the meeting with the Board of Health, have since agreed that the proposals of the Under-Secretary for Scotland should be accepted, and it is hoped and expected that the erection of the necessary houses will proceed without undue delay or further difficulties being encountered.

STATE-AIDED HOUSING SCHEMES.—The modified housing schemes, comprising 332 three-apartment and 148 four-apartment houses erected in ten different localities throughout the District are, with the exception of 14 houses on the Lambhill Site, now completed and occupied. The 14 houses referred to will be ready for occupancy at an early date.

HOUSING, TOWN PLANNING, &c. (SCOTLAND) ACT, 1909, SECTION 17.—Secondary inspections were made of 188 houses, previously reported on, all of which, with one exception, were found to be in a state so dangerous or injurious to health as to be unfit for human habitation. During the year 19 houses were voluntarily closed by the owners, 15 of which were demolished.

HOUSING SCHEMES.—Statement as at 31st December, 1924.

PARISH.	SITE.	Number of Houses to be built.	In course of construction.	Houses completed.	Houses Let.	Apartments.		Rents.	Average cost per House per accepted Tender.	Remarks.
						3	4			
Glasgow	Lambhill	72	14	58	58	48	24	£28 £32	*£818 9 0	14 nearing completion.
(late Barony)										
Do.	Millerston	76	...	76	76	56	20	" "	£826 3 0	
Cadder	Auchinairn	48	...	48	48	36	12	" "	£818 9 0	
Do.	Bishopbriggs	76	...	76	76	48	28	29	£1,011 (3 Apts.)	
Do.	Chryston	14	...	14	14	8	6	28	£850 (4 Apts.)	
Do.	Garnkirk	24	...	24	24	16	8	" "	£478 0 0	
Do.	Gartcosh	28	...	28	28	20	8	" "	£489 0 0	
Do.	Stepps	16	...	16	16	12	4	" "	£480 0 0	
Rutherglen	Eastfield	102	...	102	102	72	30	" "	£801 7 0	
Carmunnock	Carmunnock	24	...	24	24	16	8	" "	£827 18 0	
	Total	480	14	466	466	332	148			

*The average cost of Houses is exclusive of cost of land, professional charges, roads, and sewers, etc.

HOUSING, TOWN PLANNING, &c. (SCOTLAND) ACT, 1919.—Notices in terms of Section 25 (1) of this Act were served on the owners of 17 dwelling houses considered to be not in all respects fit for human habitation, and the requirements specified in the notices were in 14 of the cases given effect to by the owners.

Under Section 40 (1) of the same Act, the requirement of a notice served in 1923 was carried out and a water supply provided for part of a property in the village of Carmunnock.

Intimation was given under Section 41 (1) as to insufficient water-closet accommodation in 1 case only, but in 30 cases outstanding at the close of 1923, the requirements of intimations given were complied with by the owners during the year under review, and at the close of the year 4 cases were still pending. As regards 12 cases included in the return for the previous year it is doubtful whether the financial circumstances of the owners are such as to warrant the requirements being unduly pressed, keeping also in view the relatively low valuation and condition of the subjects referred to.

In terms of Section 44 (1) of the Housing, Town Planning, &c., Act, 1919, the consent of the Local Authority was given for the erection of 8 one-apartment houses, with scullery and w.c., and for 159 two-apartment houses, for which plans were lodged, the former being to provide increased accommodation in connection with the Incorporated Glasgow Old Men's Friend Society and Old Women's Home, at the Institution at Milncroft, near Shettleston, and the two-apartment houses are for the accommodation of colliery workers and for workers employed at Gartcosh Iron & Steel Works. These houses conform, as indicated by the plans approved, with the requirements of the Housing Act of 1923, as to superficial area, and are eligible for the subsidy offered by the District Committee to private enterprise.

BUILDING BY-LAWS.—The number of plans lodged and approved was 87, as compared with 62 in the previous year. The number and size of the houses, as indicated by the plans lodged, were as follows:—8 houses of one apartment, 159 of two apartments, there being special circumstances attached to the proposed erection of these houses. The consent of the Local Authority was given, in terms of Section 44 (1) of the Housing, Town Planning, &c., (Scotland), Act, 1919, for the erection of 308 houses of three apartments, 52 of four apartments, 29 of five apartments, and 40 of six apartments and over, all provided with bathroom, scullery, or kitchenette, and other conveniences.

In addition to above the plans lodged for approval include the following:—Alterations and additions to existing buildings, 6; erection of workshops, 7; stores, 2; single shops, 6; double shops, 2; garages, 7; pavilion, 1; offices, 4; school buildings, 1; church, 1; bank buildings, 2; power houses, 3; halls, 1; and police cells, 2.

The Inspector of Buildings reports that in administering the Building By-Laws, 67 visits of inquiry in connection with sites, &c., relative to plans lodged, and 1,077 inspections were made during the progress of construction or alteration of houses or other buildings, and that in connection with sites, formation of roads, construction of sewers, fences, the progress of building construction, and other matters relative to the District Committee's Housing Schemes 524 inspections were made.

244 applications of the smoke test were made to the drains and plumber work of 187 properties.

184 houses, 1 shop, 1 workshop, 1 office, including houses in connection with the housing schemes were passed for occupancy.

WATER SUPPLY.

The water supply to the areas for which the Corporation of Glasgow is directly responsible has been fairly well maintained, and there have been no complaints.

Cadder Special District.—The supply over the whole Special District during the year has been satisfactory, with the exception that some complaints were received as to want of pressure at several of the higher levels, due to some extent to the smaller mains having become silted up. Arrangements were made to have the mains thoroughly scraped in order to increase the supply, and this has been done in several cases.

Arrangements were also completed during the year, and an agreement come to with the owners of Easter Cadder and Meiklehill Farms, which are situated in the northern area but outwith the boundaries of the Special Water District, to give a supply to these farms, and houses in connection therewith, and it is expected that the work of laying the necessary pipes will be started shortly. The cost involved is estimated at £800.

In view of developments in housing throughout the District, and the increasing consumpt of water, and as schemes for the relief of unemployment, the District Committee have agreed to the following works being proceeded with, intimation having been received from the County Clerk that the Unemployment Grants Committee had agreed to give a grant of 75 per cent. of the Interest and Sinking Fund Charges on a loan of £17,000, for a period of fifteen years, for the carrying out of the work, on condition, *inter alia*, that the work is actively commenced by 1st January, 1925.

- (1) The duplication of the pumping main from Lethamhill to the high level tanks at Craigend. 12-inch pipe. 1,760 yards. Estimated cost, £3,080.
- (1A) An additional high level tank at Craigend, with a capacity of 125,000 gallons, same as existing tanks. Estimated cost, £3,500.
- (2) Additional 6-inch main from Balornock meter to Drumbottie. 1,500 yards. Estimated cost, £1,200.
- (3) Duplication of the main from Drumbottie to the village of Auchinloch. 5 inches diameter. 5,600 yards. Estimated cost, £3,640.
- (4) The duplication of the main in Garnkirk Road, Drumcavil Road, and Lochend Road to Gartcosh. 6-inch pipe. 3,100 yards. Estimated cost, £2,500.
- (5) Duplication of pipe in Lochend Road from Gartloch Road to Gartcosh Station. 5-inch pipe. 400 yards. Estimated cost, £260.

The existing 3-inch and 2-inch mains in Cumbernauld Road, from Moodiesburn to Mollinsburn, 2,650 yards, to be scraped at a cost of £222 7s. 6d.

One or two other short extensions to provide for houses in course of construction have also been arranged for and are in course of being carried out.

In the Burnside and Cathkin Areas of Rutherglen Parish building operations are still going on, and the water supply to this part of the district is being provided by the District Committee of the Middle Ward of Lanarkshire, and a portion of the Glenboig area is also supplied from the Middle Ward mains.

DRAINAGE.

SPECIAL DRAINAGE DISTRICTS.

Barony.—A rather serious chokage was discovered in the main outfall sewer leading from the Cumbernauld Road through the lands of Kennyhill, near Carntyne, causing flooding of a portion of the surrounding ground and pollution of the Carntyne Burn. It was found that the cast-iron frame and cover of a manhole on the sewer had been removed, evidently by some mischievous persons, and the manhole completely filled up with large stones, several of which had been carried a considerable distance down the sewer, with the result that the sewer had to be opened at several points before a clearance was effected, otherwise the sewers throughout this Special District continue in good working order.

All the manholes were examined and dustpans cleaned out during the year.

Four drain connections were made to the sewers.

Arrangements have now been completed for the construction of a sewer in Robroyston Road and Garngad Road, to connect with the Glasgow Corporation sewers in the Garngad Road at Provanmill, to provide for the drainage of houses proposed to be erected on the west side of Robroyston Road by Messrs. John Watson, Ltd., Colliery Owners.

The Committee also recommended the extension of the boundaries of the Barony Drainage District to include an area at Robroyston, including the site of Messrs. Watson's proposed houses. This was agreed to at a Special Meeting of the District Committee on 6th January, current.

Westthorn Sewage Purification Works.—These works have been carefully attended to during the year. The settling tanks and separators were cleaned out twice during the year and minor defects remedied, including the repairing, scraping, and painting of the iron railings surrounding the works, and exposed wood and iron work of the buildings.

With regard to the improvement of these works, referred to in my last report, the three constituent Authorities, viz. :—The Corporation of Glasgow, the District Committee of the Middle Ward of Lanark, and the District Committee of the Lower Ward, have approved of the report of the officials regarding the conversion of the works into

activated sludge works, at an estimated cost of £17,360, and have remitted to the Lower Ward Committee to have the work carried out, and Messrs. Warren & Stuart, C.E., have been instructed to proceed with the preparation of Plans, Specifications, and Schedules, with a view to tenders for the work being obtained.

Rutherglen (Landward).—Plans, Specifications, and Schedules for sewers proposed to be constructed on Eastfield Estate were submitted by the Estate Engineers, for the approval of the District Committee, and conditionally approved.

In order to relieve the pressure on certain Lower Ward sewers the matter of joint arrangements between the Middle and Lower Wards, with a view to the drainage of portions of the Lower Ward, including a portion of Burnside and adjoining areas, being taken into a scheme, which the Middle Ward is promoting for the drainage of adjacent lands, is at present under consideration, the Engineers having been asked to go into the matter and report.

In order to prevent as far as possible the risk of flooding during heavy rainfall, the joint intercepting sewer along the River Clyde, from a point near Clyde Paper Works westwards to Dalmarnock Railway Bridge and the connecting sewer from Baronald Street, was thoroughly cleared of silt during the spring months, but something more is required to relieve the surcharging of these sewers as flooding continues, connecting drains also become surcharged and complaints are received from time to time.

Samples of sewage and silt taken from this sewer showed that a considerable quantity of oil was being discharged into it—coal dust and road grit seemed to be the predominant substances causing silting. The oil was traced to the Fish Meal and Manure Works in Downiebrae Road, and the owner was called upon to reconstruct a portion of the drains at his works, and to introduce chambers or cesspools to intercept the oil. This was done and the result has been a considerable saving in oil to the owner.

The sewer manholes all over the District were examined and the dustpans cleaned out during the year. Two of the cast-iron frames on manholes were found to be broken, presumably due to heavy traffic passing over them, and had to be renewed.

The flushing chamber on the sewer in Dalmarnock Road was cleaned out and freed from corrosion, and the water supply regulated to ensure flushing twice daily.

The old estate sewer on the railway at Farne Cross was found to be choked during the month of July, causing serious flooding on the railway and holding up the drainage from a laundry connected to it. The chokage was cleared on the Estate Agents being communicated with.

Intermittent chokages occurred on a private drain in a lane at the rear of Castlemilk Terrace and Stirling Drive, Burnside, causing flooding in certain of the gardens. This, however, was remedied at the expense of the owners. As the recurring chokages are evidently due to the very flat nature of the drain some improvement was suggested which, if carried out, might help to mitigate the annoyance caused from time to time.

Five drain connections were made to the sewers during the year in this District.

Bishopbriggs and Auchinairn.—During the year the boundaries of this Special Drainage District were, by resolution of the District Committee, altered and enlarged so as to include an area lying north of the existing boundaries and including Jellyhill Cottages, &c.

In connection with the new Sewage Disposal Works and outfall sewer, the tender of Mr. F. J. C. Lilley, amounting to £3,263 3s. 4d., for the construction of the sewer was accepted and this part of the work has been completed, and at a later date a tender, amounting to £5,659 2s. 11d., by the same Contractor, for the construction of the Sewage Disposal Works was accepted, and the work of construction is now proceeding.

In connection with the aeration plant required for the activated method of sewage treatment a tender by the Ames Crosta Sanitary Engineering Company, Nottingham, and amounting to £1,339 4s., has been accepted. This does not include electric motors required, which can be obtained locally.

To provide for the drainage of houses being erected on the west side of Kirkintilloch Road, 160 yards of an extension northwards of the main sewer in that road was carried out, the estimated cost being £300.

Two chokages of the sewers occurred, one in Stuart Drive, the other in Kirkintilloch Road, near Viewfield Road, which were cleared. Otherwise the sewers were in good working order.

The dustpans and manholes were cleaned out during the year and the settling tanks at the Sewage Works were cleaned out twice.

Ten drain connections were made to the sewers.

Stepps.—The sewers in this District were maintained in good order, the manholes were examined and, along with the dustpans in them, cleaned out.

Twelve drain connections were made to the sewers during the year.

A new 9-inch sewer was laid in West Avenue, for the drainage of houses being erected on south side of Victoria Road, and which will be available for the majority of the existing houses, presently draining to an old estate sewer, which is not in a very satisfactory condition, when the owners choose to make application for connections.

For the drainage of houses proposed to be erected on the south side of Mount Harriet Drive, but outwith the boundaries of the Drainage District, plans of a proposed 6-inch drain, to connect with the District Committee's outfall sewer at a point near the Sewage Works, were submitted on behalf of Colonel Sir Alex. Sprot, M.P., and remitted to the Committee's Engineers with instructions to report. It has, however, since been arranged that a 9-inch sewer will be constructed by Sir Alex. Sprot, to Plans, Sections, and Specifications, to be approved by the Engineers, and under the supervision of an Inspector appointed by the District Committee, but paid by Sir Alex. Sprot, with a view to the sewer being taken over by the Committee if, and when, the boundaries of the Drainage District come to be extended, and to the assessable valuation of houses draining to the sewer, the drainage rate from which is sufficient to meet interest on and liquidation of the cost of the sewer.

Complaint was made by the owner and occupier of a cottage situated at the corner of Cumbernauld Road and Lenzie Road, Stepps, as to an accumulation of water underneath the floors of the house, and alleged to be coming from a sewer in the vicinity. On investigation being made it was found that the cause was due to an old rubble drain carrying surface water, which had been in some way damaged and obstructed, causing the water to flow in the wrong direction. On the drain being repaired all cause for complaint gradually disappeared.

The question of the extension westwards of the 9-inch sewer in Cumbernauld Road has again been under consideration. Plans have been approved for the erection of five double cottages on the north side of the road, for which drainage facilities are required, and alternative proposals have been communicated to the feuars as to the conditions on which the sewer might be extended.

Stepps Sewage Disposal Works.—I had occasion during the summer to call the Committee's attention to the defective state of a portion of the distributing trays over the filter beds at these works, and to the necessity of increasing the capacity of the sewage tanks, and at the same time suggesting that before deciding to renew the distributing trays the question of adopting some other means of distributing the tank effluent over the filters, such as travelling sprinklers, should be considered.

My report was remitted to the Committee's Engineers, to go into the matter, and a report by them was considered at a meeting of the Drainage Committee on 18th November, and approved, provided a grant was obtained from the Unemployment Grants Committee, to the suggested works being carried out at an estimated cost of £1,260. A grant has been obtained and the work is about to be proceeded with.

The proposed alterations involve converting the existing separator into an improved grit chamber, and constructing a new separator, and increasing the capacity of the sewage tanks by 5,525 gallons; scrapping of the distributing trays, and introducing a distributor known as the "Fiddian" distributor, which works on the principle of the overshot wheel, and can be operated effectively with a fall or head of water of 1 foot 9½ inches, and this can be obtained at Stepps Works by a slight raising of the level of the sewage tanks and by lowering the surface of the filter beds by a few inches. These alterations can be carried out within the existing boundaries of the works.

Chryston and Muirhead.—The sewer manholes were examined and the dustpans cleaned out. Three manhole covers and frames were discovered to have been broken, evidently by heavy traffic passing over them, and had to be renewed. A rather serious chokage of the main sewer occurred in Cumbernauld Road at Moodiesburn and was, after some trouble, cleared. The chokage was found to be due to a large stone 9 inches by 4 inches, having by some means got into the sewer, and judging from the position at which it was found had probably been left in the sewer while under construction. Otherwise the sewers continued in good working order.

10 drain connections were made to the sewers during the year.

The sewage tanks at Bridgend were cleaned out during the year, and repairs carried out on the distributing trays and channels over the filter beds, and on the fencing surrounding the sewage works.

The sewage tanks at Druncavel and at Moodiesburn were cleaned out, the latter twice, during the year, including some improvements on the tank to facilitate cleaning operations.

Carmunnock.—The sewers in this Drainage District were maintained in good working order. Several of the dustpans in the manholes were found to be defective and were repaired.

The settling tanks at the sewage works were cleaned out and defective portions of the cement coping on the tanks, &c., were repaired, and the works are being more efficiently attended to than formerly.

The attention of the Drainage Committee was called to the foul condition of the burn into which the sewage effluent from the works discharges. This was attended to and the burn cleaned.

South Lenzie.—The sewers in this Drainage District are the property of, and are under the charge of the Commissioners of the Burgh of Kirkintilloch, and there is nothing special to report, except that arrangements were concluded whereby a number of houses in course of erection in the Lower Ward Area, but outwith the boundaries of the Drainage District, are to drain to the sewers.

Gartcosh.—The new Sewage Works have been in operation since September, 1923, and fairly satisfactory results are now being obtained, although difficulty was experienced at first in obtaining a good tank effluent. This was due to gassing being set up in the separator causing a discharge of the finer solids into the Bothlyn Burn, this, however, was to some extent obviated by the introduction of a scum board across the chamber, and as near as possible to the outlet pipe, the result being an improved effluent.

The tanks were cleaned out twice during the year, defective valves were repaired and a bye-pass to the storm overflow constructed, in order to facilitate the work of cleaning the tanks.

To provide facilities for the drainage of a large number of houses in course of erection, an extension southwards of the sewer in Lochend Road, and a new sewer in Gartloch Road, connecting therewith, was found to be necessary, and a commencement was made with the construction of these towards the close of the year.

Three drain connections were made to the sewers.

SCAVENGING.

There are now nine Special Scavenging Districts in the Lower Ward, and embrace all the most populous areas, with the exception of the Village of Carmunnock, where the formation of a Scavenging District was opposed some time ago.

During the year the Village of Gartcosh, which is developing from year to year, was formed into a Special District for scavenging purposes, and the work of collecting and disposing of the household refuse was actively commenced at the beginning of the current year.

The boundaries of South Lenzie Special Scavenging District were extended and enlarged to include the Village of Auchinloch, lying to the south of the existing District, and the scavenging of the additional area has been in operation since 16th May, and the result has been an appreciable improvement in the sanitary condition of the village.

The following are the details relative to scavenging in each of the Special Districts:—

North Shettleston.—A daily collection and removal of household refuse is in operation, the refuse being delivered and disposed of at the Glasgow Corporation Refuse Destructor Works at Haghill, at a cost of 4s. per ton.

The estimated quantity of refuse collected during the year was 462 tons 13 cwts.

Back courts and private streets and lanes were regularly cleansed, and the sweepings and road mud amounting to 21 tons 10 cwts., deposited in the coup at Tollcross.

The two dust floats and other tools, the property of the District Committee, have been kept in good order.

Several of the back courts at tenement properties have been much improved by being ashphalted, and can now be kept in a cleaner state. There is still a good deal to do in this connection and efforts continue to induce owners of property to consider the desirability of having the surfaces of the courts improved, so that they can be kept free from nuisance or offensiveness, but statutory powers are required to enforce work of this kind being carried out.

Rutherglen.—The cleansing of this Special District is by contract, and goes on daily, the object being that the more populous parts will be attended to at least twice weekly and the residential parts once

a week. The work of cleansing continues to increase as the District develops, but has been attended to in a much more satisfactory manner than during the previous year.

The estimated quantity of refuse collected and delivered at the Destructor Works at Canbuslang, belonging to the District Committee of the Middle Ward, was 879 tons 14 cwts.

24 new dustbins were provided during the year.

The unsatisfactory condition of two or three of the private streets in this Special District has given cause for complaint. The owners who may be held responsible have been appealed to from time to time, but with little or no effect, and the only way improvements can be effected is by an enforcement of the powers contained in Section 39 of the Public Health Act, and applicable within Special Scavenging Districts.

South Lenzie.—The contract for the cleansing of this District changed hands at 15th May.

Complaint was made as to the laying down of household refuse on the road of access to the coup by the contractor. This, however, was remedied, and otherwise the work has been fairly well attended to.

Bishopbriggs and Auchinairn and Lambhill.—The work of collecting and removing the refuse in these two Districts is in the hands of one contractor, and has been satisfactorily attended to.

Millerston and Riddrie.—Owing to the development of this Special District and the distance the refuse has to be taken to the place of deposit, it has been necessary to add another day per week to the work of cleansing, which is carried out by direct labour, with the hire of a horse and man on four and a-half days, a weekly removal of refuse over all being maintained.

The number of cart loads of refuse removed during the year was 626.

Stepps and Chryston and Muirhead.—The scavenging of these two Districts is under the charge of a man employed by the Scavenging Committees, with the hire of the necessary horses and men as are required to maintain a weekly removal of refuse from all premises within the two Districts.

The number of cart loads of refuse removed in the Stepps District was 640, and in Chryston and Muirhead 1,037.

With regard to the disposal of the refuse collected in the Chryston and Muirhead District, a request was made to the Scavenging Committee by Cadder Parish Council to allow them the refuse, or such of it as was suitable for the purpose of levelling a portion of the Public Park at Muirhead, which is under their charge. On being consulted with regard to this suggestion I took strong objection to it, in view of the fact that the park occupies a position in the centre of four roads, two of them prominent public highways, and is also almost surrounded by dwelling-houses and other premises, including a public school, and of the risk of nuisance likely to occur by the difficulties that, in my opinion, were sure to be encountered in selecting from the refuse such material as would be inoffensive and suitable for the purpose intended, and pointing out that in any case whatever the nature of the refuse used it should at once be covered over to a sufficient depth with soil or other suitable material, so as to avoid complaints.

The Scavenging Committee, after careful consideration, agreed to the suggestion of the Parish Council, and instructed that only clean refuse free from any offensive matter should be laid down and immediately covered over. Shortly afterwards, as a result of complaints from residents in the locality of the park, I had occasion to call the attention of the Committee to about 40 cart loads of very offensive refuse having been laid down and left uncovered, and which, in my opinion, constituted a decided nuisance, and as a result of my communication to them the Committee ultimately agreed that no more refuse should be deposited. At a subsequent meeting, however, this decision was reversed, on the Parish Council undertaking to provide suitable covering material and to employ a man or men to at once cover whatever refuse might be laid down, the Scavenging Committee again stipulating that only clean refuse be taken to the park.

The work of levelling the park has since been going on, and from inspections made and from other available data it is evident that the most of the refuse of the district, much of it of an offensive nature, is being used for the purpose and only lightly covered over, the whole proceedings being, in my opinion, most objectionable and in direct opposition to the first essentials of proper sanitation.

The number of inspections made during the year in connection with scavenging was 6,383.

LIST OF SPECIAL DISTRICTS IN LOWER WARD.

District.	Parish.	Water.	Rate of Assessment per £			Light- ing.
			Drainage.	Sewage Purification.	Scaveng- ing.	
Bishopbriggs and Auchinairn.	Glasgow and Cadder.	1/7½	10d.	-	5d.	4d.
(a) Cadder	do.	1/7½	-	-	-	-
Carmunnock.	Carmunnock.	2/6	1/	-	-	-
Chryston and Muirhead.	Cadder.	1/7½	1/2	-	7d.	4½d
Gartcosh,	do.	1/7½	7d.	-	10d.	-
Glenboig,	do.	1/7½	-	-	-	4d.
Lambhill,	Glasgow.	(b) Levied by Glasgow.	-	-	5½d.	5½d.
(c) Millerston	do.	do.	(d)	(e) 6·05d.	4d.	4½d.
(c) North Shettleston.	do.	do.	(d)	(e) 6·05d.	7d.	5d.
Rutherglen	Rutherglen.	do.	2d.	(e) 6·05d.	4½d.	5d.
South Lenzie.	Cadder.	1/-	3d.	-	6½d.	5d.
Stepps	do.	1/7½d.	8d.	-	3½d.	4½d.

NOTES.—(a) *The Cadder Water Supply District* includes part of Bishopbriggs, Cadder Village, Auchinloch, Mavis Valley, Jellyhill, Stepps, Chryston and Muirhead, Bridgend, Mossvale, Heathfield, Garnkirk, Moodiesburn, Mollinsburn, Gartcosh and Garnqueen; (b) *Glasgow Water* is supplied to Budhill, Springboig, Sandyhills, part of North Mount Vernon, part of Carntyne, Lightburn, Lambhill, Millerston, and Riddrie, Colston and part of Bishopbriggs in Glasgow Parish; Auchinairn village in Cadder Parish; and Farme, Eastfield, and part of Burnside in Rutherglen Parish; (c) Barony Drainage; (d) No assessment for drainage; (e) Glasgow Sewage Purification Area assessment.

HOUSE DRAINS.

325 visits were made relative to the condition of house drains and the provision of water-closets. 88 inspections were made of the drainage systems of 21 properties, which, on being exposed, were found to be defective and include inspections during the work of repair or reconstruction. 26 drainage systems were repaired or reconstructed. 28 applications of the smoke-test were applied to the drains of 23 properties. 30 water-closets were provided, and 4 were in progress of construction or pending at the close of the year. 3 ashpits and 10 privies were abolished.

In my report for the year 1920, a statement, as required by the Scottish Board of Health, was included, showing the number of water-closets provided in place of closets on the conservancy system in populous places, from the year 1906 to 1920, inclusive, and the number of privies, earth-closets, and privy-middens remaining at the close of 1920.

Since 1920 all the populous places in the District of the Lower Ward, which are also Special Drainage Districts, 8 in number, as follows, are with the following exceptions as shown, practically all provided with water-closets:—

Special District.	Privies Remaining.	Privy Middens Remaining.	Pan Closets Remaining.
Barony, - - - - -	—	—	—
Bishopbriggs and Auchinairn, -	1	1	3
Chryston and Muirhead, - -	5	5	—
Stepps, - - - - -	—	—	—
South Lenzie, including Auchinloch,	—	—	—
Carmunnock, - - - - -	3	1	—
Rutherglen (Landward), - -	1	1	2
Gartcosh, - - - - -	10	3	—
	20	11	5

Other small groups of buildings throughout the District, and outwith Special Drainage Districts as detailed in the Report for 1920, remain practically the same as at that date as regards sanitary conveniences, there being no suitable drainage facilities available.

Lambhill Village.—In this village there is a private sewerage system, owned by the Superiors, and all the properties, with one exception, are provided with water-closets.

COMMON CLOSES, STAIRS, AND WATER-CLOSETS.

In carrying out the By-Laws relative to the cleansing of closes, stairs, and water-closets used in common at tenement properties, 212 inspections were made. Rotation date cards were issued to occupiers of 34 dwelling houses who failed to keep the closes, &c., clean. 18 notices, in terms of Section 117 of the Burgh Police (Scotland) Act, 1892, were served on the Owners or House Factors of tenement properties situated within Special Scavenging Districts, requiring them to whitewash or cleanse the close and stair walls, and this was attended to at 40 tenements.

NUISANCES.

The following summaries show the number of nuisances dealt with in each parish and the number of intimations and notices served, &c. :—

	Glasgow (late Barony).	Cadder.	Rutherglen.	Carmunnock.	Total.
Recurring Nuisances under Section 16, Sub-secs. 2, 5, and 7, 77	83	82	10	252	
Structural Nuisances under Section 16, Sub-secs. 3, 4, 6, 8, 9, and 10, - - - 18	8	7	2	35	
	95	91	89	12	287

Intimations served during 1924, in terms of Section 19 of the Public Health Act, 1897, - - - -	287
Notices served in terms of Section 20, - - - -	5
Notices served in terms of Section 40, - - - -	2
Notices served in terms of Section 117 of the Burgh Police (Scotland) Act, 1892, - - - -	18
Insanitary conditions dealt with by letter—letters issued, - - - - -	130
Notices and letters issued under the Cowsheds and Dairy Regulations, - - - - -	4

HOUSING, TOWN PLANNING, &c., ACT, 1919.

Notices served in terms of Section 25 (1), - -	17
Intimations in terms of Section 41 (1), - - - -	1

9,132 inspections were made for the detection of nuisances, and in connection with complaints received, which numbered 179. The great majority of nuisances discovered and dealt with were, as usual, due to choked drains, choked or otherwise defective water-closets, and foul ashpits. Nuisances of this nature are of daily occurrence, and are largely due to want of care in the use of conveniences provided, with the result that considerable annoyance and expense is caused the owners of property, which otherwise might be avoided with a little judicious care on the part of the tenants.

169 house-to-house visits were made for the detection of overcrowding and as regards cleanliness. 2 notices were served, in terms of Section 40 of the Public Health Act, on the occupiers of houses found in a filthy state, requiring them to have their houses, bedding, and other articles of clothing thoroughly cleansed, and this was attended to in both cases.

As regards overcrowding, so much has already been said in previous reports that it is difficult to find anything fresh to say on the subject, and one can only reiterate the opinion that the present conditions can only be remedied or alleviated by the speedy provision of more houses, suitable to the requirements of those who are sorely in need of them.

I have, in previous reports, given instances of scandalous cases of overcrowding and could give many more. Sanitary Inspectors in other districts and towns have done the same thing, but such appeals have had little or no effect on the situation, nor do they appear to make for progress or facilitate matters in any way, and until the Government and Local Authorities combine to require those connected with the Building Industry and Trade Unions to recognise their responsibilities in the matter of housing, and see to the clearing away of all obstacles and regulations that stand in the way, the cry of those in need of houses will have been in vain.

Special inspections with regard to the following, among other matters, were made and reports prepared for submission to the Sub-Committee on Public Health :—Drainage of Gartloch Mental Hospital; property known as Peter's Land, Lambhill; choked or defective sewer at Bishopbriggs; as to the provision of washing-houses; Huntershill Quarry nuisance; protection against accidents at disused mines; extension of South Lenzie Special Scavenging District; Soap Boiling business at Dryfield; ruinous building at Carmunnock; nuisance through keeping of hens and ducks at property, Bishopbriggs; provision of water-closets at Chryston; depositing of refuse in Public Park, Muirhead; smoke nuisance at Rutherglen; regarding sanitary conditions in mining areas; condition of old houses and overcrowding at Millerston; formation of Special Scavenging District for Gartcosh; condition of urinal at Rutherglen; suggested works for relief of unemployed; insanitary houses at Crowhill, Bishopbriggs; removal of refuse from Distillery Company's houses, Garnkirk; housing of potato diggers; establishment of gut cleaning business at Carntyne; and establishment of tallow melting and bone boiling business at Carntyne.

The property known as Peter's Land, Lambhill, comprising nine dwelling-houses, which were dealt with under Section 16 (1) of the Public Health Act, as premises of such construction or in such a state as to be a nuisance or injurious or dangerous to health, still continues to be occupied. The owners, instead of carrying out the repairs suggested by the Local Authority for the abatement of the nuisance and ordained by the Sheriff who heard the case to be carried out, were granted an order for eviction by another Sheriff. The evictions were subsequently carried out, but the tenants at once resumed possession of the houses and are now supposed to be squatters.

With reference to similar conditions existing at a property known as Crowhill Cottages, Bishopbriggs, comprising four small houses, some difficulty was experienced for a time in getting the parties supposed to be concerned to admit ownership, but, ultimately, this difficulty was removed and the repairs specified in the notice served were carried out.

Notices, in terms of Section 20 of the Public Health Act, were authorised to be served, and in five cases this was found to be necessary before the nuisances complained of were abated.

INFECTIOUS DISEASE.

299 visits of inquiry were made by the Sanitary Officers, 133 apartments and 132 sets of bedding, &c., were disinfected, and 2 sets of bedding were destroyed.

OFFENSIVE TRADES.

The number of offensive businesses on the Register at the close of the year was 5, one, that of tallow melter, was removed, and sanction was granted to the establishment of the business of soap boiler in premises at Dryfield, near Kirkintilloch. Two applications were received for sanction to establish, in one case, the business of gut scraping, in premises at Carntyne, and in the other that of bone boiling, tallow melting, and bone meal manufacture, also in premises at Carntyne, to be enlarged to provide for the different processes being carried on as separate departments. Sanction was granted for these during the current year.

The businesses presently in operation, including that of blood drying at Carntyne, and the fish meal and manure manufactory at Rutherglen, have been carried on quite satisfactorily during the year, and no complaints have been received. These results, especially as regards the last-mentioned business, are largely due to strict supervision on the part of the Sanitary Officials.

PUBLIC SCHOOLS.

There is nothing special to report with regard to public schools. Those in the district are kept in excellent condition and are well looked after by the Master of Works, under the County Education Authority.

FACTORIES AND WORKSHOPS.

78 inspections were made of the sanitary conveniences at factories, and found in fair order. Water-closet accommodation was provided in two cases. 13 inspections were made of workshops and workplaces—also found in order. Two lists of outworkers were received from other Local Authorities. Inspections were made of the premises occupied by the workers and found clean and in order.

The Register of Workshops at the close of the year contains the following in each parish:—Glasgow (late Barony), 3; Cadder, 47; Rutherglen, 5; Carmunnock, 9; classified as follows:—

Dressmakers and Tailors,	-	-	-	-	-	4
Boot and Shoemakers,	-	-	-	-	-	14
Blacksmiths,	-	-	-	-	-	5
Joiners,	-	-	-	-	-	7
Plumbers,	-	-	-	-	-	6
Bakehouses,	-	-	-	-	-	2
Concrete Block Manufacturers,	-	-	-	-	-	1
Laundry,	-	-	-	-	-	1
Miscellaneous,	-	-	-	-	-	24
						<hr/> 64 <hr/>

DAIRIES AND COWSHEDS.

The number of cowkeepers and dairymen on the Register at 1st January, 1924, was 133, 4 were removed from the Register and 8 added, leaving on the Register at 31st December, 1924, 137, and

comprise the following :—Producers, 65 ; producers and retailers, 35 ; retailers or purveyors, 31 ; butter makers, 6—total, 137. The average number of cows in milk during the course of a year is approximately 2,250.

Two cases of contravention of the Dairy Regulations were dealt with by notices served on the registered occupiers of premises, and the complaints removed.

Two cases of foot-and-mouth disease were reported as having occurred at dairy farms in the district in the early part of the year.

87 inspections were made of dairy premises, all of which, in respect of cleanliness, were found in fairly good order, but in this connection more supervision is required, and in order to give the necessary attention to this important part of Public Health work, the time of an Inspector would be almost fully taken up, keeping in view the widely scattered nature of the district, and the need there is to see that milk is produced and distributed at all times under the best possible conditions. Under present arrangements other important duties imposed on the staff do not permit of the attention which, in my opinion, is required if the best results are to be attained.

Repairs were carried out at the following dairy farms :—

Blackhill Farm, Cadder Parish.—Drainage system entirely reconstructed.

Parkhouse Farm on Possil Estate, Glasgow Parish.—Byre roof repaired and re-slatted, additional lighting and ventilation provided.

SEASONAL WORKERS.

The draft By-laws, prepared in terms of Section 45 of the Housing, Town Planning, &c. (Scotland) Act, received the approval of the Scottish Board of Health, and came into operation during the year. Copies were sent early in the year to all the farmers in the district at farms where workers were likely to be employed at potato lifting, and to potato merchants, who are the employers. Notwithstanding this early intimation of the intention of the District Committee to put the By-laws in operation, notice by the farmers and merchants of their intention to employ and house the workers was only given a day or two before the date of starting work, so that no time was allowed for an inspection of the premises and the preparation of reports for the consideration and approval, or otherwise, by the Local Authority, of

the housing arrangements, with the result that the unsatisfactory conditions previously recorded remained much the same, no attention having been paid to the requirements stipulated.

Workers of both sexes were employed and housed at nine farms in the Cadder District, and on the procedure on the part of the farmers and merchants and the conditions under which the workers were housed being reported to the Committee on Public Health, it was agreed that this being the first year in which the By-laws were in operation no action should be taken, but that in future the By-laws would be strictly enforced.

17 inspections were made during the period the premises were being used.

PIGGERIES.

The number of pig feeders on the Register at 31st December was 31, exclusive of small pig-styes at farm steadings. The number of pigs in the district at the same date was 4,075. The premises are generally kept fairly clean and in a good state of repair. 146 inspections were made during the year.

Plans were approved for an extension of a piggery at Auchinairn Road, Auchinairn, Bishopbriggs, and the work of construction was completed during the year.

Plans were also approved for the erection of a fairly large piggery at Eastfield, Rutherglen, which has been completed. Constructed in accordance with the most up-to-date ideas this is one of the best structures in the district.

The drainage system of a large piggery at Cadder House was reconstructed.

BURIAL GROUNDS.

The burial grounds in the district continue to be well conducted, and are kept in good order. Five inspections were made of the common ground in two of the cemeteries, and in which burials were found to be carefully carried out.

Nine visits of inquiry were made in connection with applications for burial by the Local Authority of unclaimed bodies, and others where relatives were not in a position to meet the cost. Seven burials were carried out, in terms of Section 69 of the Public Health Act. In two cases the cost of burial was afterwards recovered.

TENTS AND VANS.

13 inspections were made of travelling vans sojourning in the district for some time. These were found to be kept in a clean and tidy condition, but the surroundings were not always so satisfactory, and warnings were found necessary as regards the disposal of refuse, liquid, and other matter.

REPORTS SUBMITTED.

During the year, in addition to the usual monthly reports, descriptions of boundaries of extensions and formation of Special Districts, estimates of costs, &c., 73 special reports were prepared and submitted through the District Clerk to the several Sub-Committees, dealing with Housing, General Nuisances, Drainage, Scavenging, and other public health matters.

A statement of proceedings, &c., under the Public Health and other Acts is annexed herewith.

In concluding this report I desire to take the opportunity of recording my appreciation of the assistance and services rendered me by all members of the Public Health Staff, past and present, during my tenure of office as Chief Sanitary Inspector in the Lower Ward of the County of Lanark.

(Signed) W. S. BRUCE.

**STATEMENT BY THE SANITARY INSPECTOR OF PROCEEDINGS
UNDER THE PUBLIC HEALTH ACT, 1897, HOUSING AND
TOWN PLANNING, &c., ACTS, 1909, 1919 AND 1923, AND
OTHER ACTS, DURING THE YEAR 1924.**

Nuisances.

	<i>Number</i>
Complaints received (verbal and written),	179
Visits of inquiry and inspection,	9,132
Special inspections,	36
Intimations served in terms of Section 19 of the Public Health Act,	287
Notices served in terms of Section 20 of Public Health Act, ...	5
Notices served in terms of Section 40 of Public Health Act, ...	2
Legal proceedings taken,	1
Successful,	1
Insanitary conditions dealt with by letter (letters issued), ...	130
Number of recurring nuisances dealt with by intimation, ...	252
Number of structural nuisances dealt with by intimation, ...	35
Nuisances abated,	275
Nuisances outstanding at 31st December, 1924,	14

Infectious Disease.

Notifications received,	265
Visits of inquiry by Sanitary Inspectors,	299
Patients removed to hospital,	162
Apartments disinfected by Sanitary Inspectors and Health Visitors,	132
Halls disinfected,	1
Bedding and articles of clothing disinfected by Sanitary Inspectors and Health Visitors,	131
Bedding, &c., removed for disinfection,	1
Bedding, &c., destroyed,	2
Visits of inquiry by Sanitary Inspectors and Health Visitors <i>re</i> non-notifiable cases,	518
Intimations to parents and school teachers,	386

Factories and Workshops.

Factory inspections,	78
Workshop inspections,	13
Communications received from H.M. Inspector of Mines, ...	1
Inspection of disused mines,	21
Lists of outworkers received from other Local Authorities, ...	2
Visits to outworkers' premises,	2

Cowsheds and Dairies.

Number on Register at 1st January, 1924,	133
Registered during the year,	8
Removed from Register,	4
On Register at 31st December, 1924,	137
Inspection of dairy premises,	81
Contraventions of Regulations dealt with,	2
Notices and letters to registered occupiers and owners,	4
Cases of foot-and-mouth disease reported,	2

Offensive Trades.

On Register at 1st January, 1924,	5
Removed from Register,	1
Application for sanction to establish,	3
Applications granted,	1
Applications pending,	2
On Register at 31st December, 1924,	5
Contraventions dealt with,	2
Notices and letters to owners,	2
Inspections of premises,	143

Drainage.

Visits <i>re</i> condition of house drains,	248
Drain inspections,	88
Defective drains disclosed,	21
Drainage systems remedied or reconstructed,	26
Applications of smoke test,	28
Number of properties tested,	23
Visits <i>re</i> provision of water-closets,	67
New water-closets provided, including those provided under Section 41 (2) of Housing, &c., Act, 1919,	30
Water-closets in course of erection or pending,	4
Connections to public sewers and inspections of same,	44
Connections to private sewers and inspections of same,	1
Sewer inspections <i>re</i> defects or chokages, clearing, and repairs, &c.,	65
Inspections of Sewage Purification Works,	277
Sewage tanks cleaned,	7

Building By-Laws.

New Buildings, Alterations and Additions.

Number of plans lodged,	87
Number of plans approved,... ..	87
Visits <i>re</i> plans lodged,	67
Inspections of new buildings, alterations, additions, &c., by Buildings Inspector,	1,077
Applications of smoke test to drains and plumber work, ...	244
Number of properties tested,	189
Houses passed for occupancy,	184
Stores, shops, workshops, offices, halls, garages, &c., passed, ...	6

District Committee's Housing Scheme.

Visits by Buildings Inspector <i>re</i> sites, formation of roads, construction of sewers, &c., &c.,	198
Inspections <i>re</i> progress of building construction,	326

Housing, Town Planning, &c., Act, 1909.

Houses inspected for the purposes of Section 17, including secondary inspections,	188
Houses considered unfit for human habitation of above,	187
Houses closed voluntarily,	19
Houses demolished,	15
Insanitary houses dealt with under Public Health Act,	13

Housing, Town Planning, &c., Act, 1919.

Notices served under Section 25 (1),	17
Houses rendered fit for habitation by owners,	18
Notices served under Section 40 (1) to provide water supplies, —	
Requirements complied with by owners—houses supplied, ...	1
Intimations given under Section 41 (2) as to insufficient water-closet accommodation,	1
Requirements complied with by owners (including cases carried from previous year),	30
Cases still pending,	4

Miscellaneous.

Cemeteries—Inspections of burial-grounds,	5
Visits <i>re</i> application for burial,	9
Burials in terms of Section 69 of Public Health Act,	7
Costs recovered,	2
Pig-styes—	
Number on Register at 31st December, 1924,	31
Inspections,	146
Approximate number of pigs in district at 31st December, 1924,	4,075
Tents and Vans—Inspections,	13
Visits to premises alleged to be infested with rats,	5
Cases dealt with and poison supplied,	5
House-to-house visits for the detection of dirty or overcrowded houses,	169
Dirty houses dealt with,	4
Refuse coups—Inspections,	13
Visits <i>re</i> defective water supplies,	3
Samples of water taken for analysis,	3
Visits <i>re</i> housing of seasonal workers,	17
Foul streams, ditches, and cesspools—Inspections,	21
Common closes, stairs, and water-closets—Inspections,	212
Letters of warning and rotation date cards issued to occupiers <i>re</i> cleaning of stairs and water-closets,	34
Notices to owners, in terms of Section 117 of Burgh Police Act, <i>re</i> limewashing of close and stair walls,	18
Number of closes and stair walls cleaned,	40
Ashpits abolished,	3
Privies abolished,	10
Dustbins provided or renewed,	29
Cleansing and repairing of private streets and lanes—Inspections,	56
Scavenging—Inspections in Special Districts,	6,383
Fish and chip shops—Inspections,	8
Smoke observations from chimneys of public works,	28
Unsound food—Inspections,	6
Seizures of unsound food,	2
Visits and inspections of ruinous buildings,	9
Increase of Rent, &c. (Restrictions) Acts — Application for certificates,	11
Certificates granted,	11
Inspections <i>re</i> defective urinal,	2

SURVEY OF THE SANITARY CONDITION OF THE DISTRICT
OF THE LOWER WARD OF THE COUNTY OF LANARK,
DURING THE PERIOD FROM THE YEAR 1895 TO 1925.

At 1895 the district embraced the following populous places:—

BARONY PARISH.—(Shettleston and Tollcross) the greater portion annexed to the City of Glasgow in 1912. Millerston and Riddrieval (Provanmill), also now in Glasgow, Lambhill, and Colston.

CADDER PARISH.—Bishopbriggs, Auchinairn, Stepps, Chryston and Muirhead, Garnkirk, Garnqueen, Gartcosh, Moodiesburn, Mollinsburn, and South Lenzie.

CARMUNNOCK PARISH.—The whole parish, including the village of Carmunnock.

RUTHERGLEN.—PARISH.—Farme and Eastfield, Burnside (Stonelaw and Gallowflat and Shawfield Area), annexed to the Burgh of Rutherglen in 1906.

GOVAN PARISH.—The whole of South Govan, including Merryflats, Linthouse, and Shieldhall, all of which was since added to the Burgh of Govan.

30 years ago the sanitary condition of these areas was anything but satisfactory. There were only three Special Drainage Districts, viz., Barony, Carmunnock, and South Lenzie, formed under the Old Parochial Authorities, but with the exception of South Lenzie, very few sewers had been constructed, and sanitary conveniences as we know them now were practically non-existent, except in better class houses. Privies and privy middens abounded in all these areas and at tenement properties especially, the conditions were at times disgraceful. There was no proper system of cleansing and the contents of privies and ashpits were only removed when full, and in the majority of cases the contents were allowed to overflow before it was thought necessary to get a move on. The onus apparently rested on the owners of properties with regard to the abatement of such conditions as they occurred, and such nuisances were often only removed after repeated intimation and warnings on the part of the Officials of the Local Authority.

WATER SUPPLY.—A considerable part of the Lower Ward was then, and still is, supplied with water by Glasgow Corporation, and includes the areas within Barony Parish, Rutherglen Parish and South Govan, but Carmunnock Parish and practically the whole Parish of Cadder

was dependent for a water supply on the rain as it fell from the heavens, and caught in barrels or collected in draw wells, many of which were, from the character of the structures and the site of the wells in relation to house drains and ashpits liable to pollution, and were a continual source or cause of outbreaks of enteric fever.

As a result of these insanitary conditions it may be interesting to note the prevalence of enteric fever during a part of the period under review and the gradual wiping out of this disease consequent on the formation of North and South Cadder Water Districts (now known as Cadder Special Water District), and the introduction of good wholesome water into practically every house and farm stead throughout the parish. The following table shows the number of cases of enteric fever, and the percentage of deaths per 10,000 of the population occurring from this disease during the years 1891 to 1923 :—

Years.	Cases.	Deaths.
1891-95	48	2·2
1896-1900	47	1·5
1901-05	40	1·2
1906-10	40	0·6
1911-15	10	0·5
1916-20	5	0·06
1921-23	5	—

There have been no deaths since 1916, and enteric fever, so far as the Lower Ward is concerned, has been wiped out.

The death-rate for the year 1895 from all causes was 24·57 per 1,000 of the population per annum, and during one month of that year it was as high as 39 per 1,000. At 1923 the deaths from all causes had dropped to 10·1 per 1,000 per annum.

As regards infantile mortality the average deaths from 1891 to 1900 was 125·2 per 1,000 births. At 1923 the death-rate was 72·3 per 1,000 births.

From these figures it will be seen that there has been a gradual lowering of the general death-rate as well as regards the deaths occurring among infants. There can, therefore, be no doubt that improved sanitary conditions, effected by the introduction of wholesome water supplies throughout the whole District, the formation of Special Drainage Districts, Special Scavenging Districts, the provision of efficient sewerage systems, the reconstruction or improvement of house

drains, in all the populous places, the abolition of privies and privy middens, the provision of water-closets, and other sanitary conveniences, the provision of dustbins in place of ashpits, and a regular and systematic removal of household refuse, together with a more tolerant and helpful appreciation of the efforts of officials on the part of the general community, have all tended towards better and more healthy conditions throughout the whole District, and the Officials and all others concerned in the administration of Public Health matters may congratulate themselves on the work accomplished during the period referred to.

While there is yet much work to be done especially as regards the housing and rehousing of many at present living under conditions that are to be deplored, the sanitary conditions, as compared with that existing at 1895, and prior to that date are as daylight is to darkness.

Child Welfare work, which has been in operation for a number of years, has also been the means of saving child life and brightening the homes and lives of many in the community.

The following are the number of existing Special Districts including two of those already mentioned, which have been formed during the past 30 years for the purposes of Water Supply, Drainage, Scavenging, and Lighting :—

Special Water Supply Districts,	.	2
Special Drainage Districts, -	- -	8
Special Scavenging Districts, -	- -	9
Special Lighting Districts, -	- -	8

The acreage of the District is at present 24,643, with an estimated population of about 32,000, nearly all of whom benefit by the facilities afforded within the Special Districts.

W. S. B.

COUNTY OF LANARK
DISTRICT OF THE LOWER WARD.

Midwives (Scotland) Act, 1915.

Annual Report by the Medical
Officer of Health, 1924

STAFF.

Administrative Officer.

J. HUME PATTERSON, F.R.F.P.S. (G.), D.P.H.

Executive Officer and Inspector of Midwives.

JOHN P. CRICHTON, L.R.C.P. & S., D.P.H.

Nurse Health Visitors and Assistant Inspectors of Midwives.

(All hold C.M.B. Certificate).

MARGARET L. WINCHESTER. JEAN HARVIE.

MARY L. BAILLIE.

MIDWIVES (SCOTLAND) ACT, 1915.

ANNUAL REPORT, 1924.

Practising Midwives.—22 midwives resident within the district notified their intention to practise during the year. Of these, 3 resided in the Parish of Glasgow, 16 in Cadder, and 3 in Rutherglen. During the year 2 gave notice voluntarily to discontinue practice owing to leaving the district, while 1 died during a holiday abroad. 14 midwives resident outwith the district attended cases during the year, all of whom hold recognised certificates.

Certification.—6 of the midwives hold the Certificate of the Central Midwives Board for Scotland by examination; 2 have the Certificate of the Royal Maternity Hospital, Glasgow, and the remaining 14 are *bona fide* midwives.

Length of Time in Practice.—1 has acted for 38 years, and 9 have been in practice for over 20 years.

Attendance at Confinements.—625 births were registered, and of this number 592 or 94 per cent. were notified, and 44 per cent. were attended by certified midwives. The following table gives, according to Parish, the number of births registered and notified, and of those notified the person in attendance at confinement:—

Parish.	Number of Births.		Attendance at Confinement.		
	Registered.	Notified.	Doctor.	Midwife.	Handywoman.
Glasgow,	161	158	71	87	—
Cadder,	337	324	207	116	1
Carmunnock,	12	7	7	—	—
Rutherglen,	115	103	31	72	—
	625	592	316	275	1

Inspection of Midwives.—The total number of inspections made by the Assistant Inspectors of Midwives was 96. They found that the *personal conditions* were satisfactory in 14 instances, and only fair in 8. The *home conditions* were described as satisfactory in 16, and as fair in 6.

7 midwives in the District are unable to read or write, and their *records* are kept by members of the family.

Extent of Practice.—The registers kept by the midwives showed that 1 attended 38 confinements; 7 from 20 to 30; 3 from 10 to 20; 7 from 1 to 10; and 3 nil, while 1 did private nursing only with a doctor.

Medical Assistance.—In 71 instances a doctor was called to the assistance of the midwife, in accordance with the rules of the Central Midwives Board. The conditions requiring medical aid were as follows:—Delayed labour, 25; abnormal presentation, 8; stillbirth, 8; rigidity of perineum, 6; ruptured perineum, 2; retained placenta, 2; failure to find presentation, 2; adherent placenta, 1; placenta prævia, 1; anti-partum hæmorrhage, 1; post-partum hæmorrhage, 1; long anterior lip of cervix, 1; prematurity, 1; prolapse of uterus, 1; illness of mother, 4; illness of child, 5; discharging eyes, 2.

Payment of Doctor's Claims.—40 claims, amounting to £65 12s. 3d., were received, and of this sum £2 1s. was recovered from the husbands of the patients.

PUERPERAL SEPTICAEMIA (including all notifications of Puerperal Fever).—3 cases were notified and removed to hospital. 2 were doctors' cases, 1 was attended by a midwife.

STILL-BIRTHS.—During the year 22 still-births were reported, 17 of which were attended by doctors and 5 by certified midwives.

OPHTHALMIA NEONATORUM.—10 cases were notified, 2 by doctors, 6 by midwives, and 2 by health visitors.

LIABILITY TO BE A SOURCE OF INFECTION.—None received during the year.

Lightburn Joint-Hospital.

PHYSICIAN-SUPERINTENDENT—JAMES GRAY, M.B., Ch.B., D.P.H.

The admissions and discharges during the year, classified according to disease notified and according to constituent authority, are shown in Table A and Table B respectively.

The number of admissions was slightly above the figure of last year. A feature of the admissions, however, was the marked increase in the number of pneumonia cases, the steady rise of the last few years being continued. The increase this year amounts almost to 100 per cent. on the figure of last year. Scarlet fever admissions decreased considerably. The only other noteworthy feature was the increase in the admission of cases of epidemic encephalitis.

The number of deaths was 62. Seven of these died within 24 hours of admission, and have been excluded in calculating the fatality rate. The figures, thus corrected, give a fatality rate, calculated on discharges, of 9·32. The figure for last year was 6·07.

The average monthly rate of admission was 54·9. April and October were the months with the lowest and highest number of admissions, the figures being 40 and 78 respectively.

The average daily number of patients resident was 76·1. The highest number in residence was 108 on November 14, and the lowest was 53 on August 13.

Scarlet Fever.

34 cases were in hospital at the commencement of the year; 278 were admitted; 265 patients were discharged; and 5 died. Of the cases admitted 4 were wrongly diagnosed, and 1 case admitted as diphtheria proved to be scarlet fever. At the end of the year 42 cases remained in hospital.

CORRECTED DIAGNOSIS.—Measles, 2; negative, 2.

FATAL CASES.—One case was a female, aged 51, suffering from toxic scarlet fever. She was admitted on the third day of illness, and death occurred on the 3rd day after admission. The remaining four cases were males, the average age being 4 years. The average residence period was 15 days. These cases were all of the anginosa type, but in one case acute lobar pneumonia complicated the scarlet fever. All these cases received both diphtheria antitoxin and anti-streptococcal serum, and one case was given serum from a convalescent

patient. Two of these cases had enucleation of tonsils done on the 10th day of illness, but no benefit resulted.

RECOVERED CASES.—These fall into age groups, thus:—

		0-5	6-10	11-15	16-20	21-
Male, ...	...	38	37	22	8	4
Females,	...	56	54	21	15	7

SEVERE CASES.—Twelve of the cases were of the anginosa type. In 8 of these serum treatment was given, both diphtheria antitoxin and antistreptococcal sera being used. Serum sickness was observed in one case. The symptoms were pyrexia, joint pains and rash. The rash was urticarial in type, and affected trunk and limbs. These symptoms were observed 14 days after the administration of the serum. Complications occurred among these cases as follows:—Mastoid abscess, 1; adenitis, 2; otitis media, 3; arthritis, 1. The average residence period was 46 days. The average day of disease on admission was the 3rd day.

MILD CASES.—The remainder of the cases were mild in character. One suffered also from diphtheria, and another from pertussis, and cross-infection with varicella occurred in 5 cases. Serum was given in 30 of the cases. Two of these had antistreptococcal serum, and two had both this type and also diphtheria antitoxin. The remainder had only antitoxin given, the average dose being 6,000 units. Complications occurred as follows:—Otitis media, 13; adenitis, 16; suppurative adenitis, 4; rhinitis, 7; relapse, 1 (onset on the twenty-first day following onset of first attack); albuminuria, 1; arthritis, 4; nephritis, 5; mastoid abscess, 1; endocarditis, 1.

Diphtheria.

Four cases in hospital at the beginning of the year. 82 cases were admitted; 74 were discharged (including one which proved to be scarlatina); and 5 died. 7 cases remained in hospital at the end of the year.

FATAL CASES.—Of the 5 fatal cases, 3 were faucial, 1 nasal, and 1 laryngeal. The three faucial cases were all toxic in type, and were admitted on the 2nd, 5th, and 8th days of illness. They received, on an average, 38,000 units of diphtheria antitoxin. The average days' residence was 20 days.

The nasal case was admitted on the 9th day of illness, and 18,000 units of antitoxin were administered. This case died on the 48th day of illness.

The laryngeal case was admitted on the 2nd day of illness, and tracheotomy was performed, but the child died 12 hours after the operation. 8,000 units of serum were administered.

RECOVERED CASES.—In the 73 recovered cases the distribution of the disease was as follows:—Laryngeal, 7; nasal, 1; faucial, 60; faucial and nasal, 4; and faucial and pharyngeal, 1.

LARYNGEAL CASES.—One case had tracheotomy performed. The average age was 2·5 years, the average days' residence was 34, and the average day of disease on admission was the 4th day. The average dose of antitoxin was 8,000 units, and in no case was this followed by anaphylactic phenomena.

Of the nasal and faucial cases, 7 were toxic, 3 severe, and 56 mild.

TOXIC CASES.—Seven in number. Average age, 8 years. Average day of disease on admission, 3rd day. Average stay in hospital, 64 days. Average amount of antitoxin administered, 60,000 units. One case had also antistreptococcal serum. Only one case had diphtheria antitoxin administered before admission. Complications occurred as follows:—Adenitis, 2; different forms of paralysis, 4; cardiac irregularity, 2; and serum rash, 2. The serum rashes observed were urticarial in character, and affected body and limbs, and, in one case, the face. They occurred on the 8th and 11th day of illness, and were unaccompanied by any other symptoms.

SEVERE AND MILD CASES.—59 in number. The average age was 9 years. The average day of illness on admission was the 4th day, and the average number of days' residence 46. Eight cases had diphtheria antitoxin before admission, and the average amount administered after admission was 15,000. Complications occurred as follows:—Adenitis, 3; cardiac irregularity, 3; developed scarlatina, 3 (4th, 8th, and 9th week); serum rash, 2. Both rashes were urticarial in type, and no other symptoms were observed. They occurred on the 2nd and 14th day.

Tuberculosis.

20 cases were in residence at the beginning of the year; 83 were admitted; 80 were discharged; and 5 died; leaving 18 in residence at the end of the year. One case admitted as pneumonia proved to be tuberculosis, and therefore 86 cases have to be reviewed. Cases of tuberculous meningitis are considered under meningitis.

FATAL CASES.—Five pulmonary cases died; 4 were males, average age 40 years, and 1 female, aged 15 years. All were cases of so-called “phthisis desparata,” with extensive and active disease in both lungs.

DISCHARGES.—81 cases (including one case admitted as pneumonia) were discharged. These are classified as follows:—

Pulmonary,	39
Hilus,	9
Non-pulmonary—	
Joint,	5
Bone,	1
Vertebral Column,	1
Abdomen,	5
Gland,	9
Eye,	1
Skin,	1
	—
Negative,	23
	17

PULMONARY.—39 cases. 22 were improved, 14 unchanged, and 3 were definitely worse on discharge. These cases (adopting the modified Turban-Gerhardt classification) are grouped as follows:—

	I.	II.	III.
A. ...	9	9	4
B. ...	2	2	3
C. ...	1	7	2

HILUS.—Two cases, aged 5 and 11 years. Both discharged improved. No lesion discovered in lung parenchyma. One had a history of previous pertussis followed by persistent cough, and the other a history of pneumonia in infancy followed by a persistent cough. The family history in both cases was negative.

This is a very interesting and important type of case. Such patients are probably all potential pulmonary cases later in life, and unless diagnosed early and hospital treatment given with, on discharge, dispensary supervision, will go to swell the already too large number of cases, incapacitated totally or partially for work, and so form a further burden on the community.

NON-PULMONARY.—Of the 23 non-pulmonary cases, 19 were improved and 4 were unchanged. Eight cases were sent to the County Hospital, Motherwell, for X-ray examination.

NEGATIVE.—17 cases. These were cases discharged as non-tubercular. Nine of these were suspect lesions, one of which proved

to be chronic bronchitis. The remainder were losing weight or had a cough, or cough and spit.

AGE GROUPS.—

PULMONARY AND HILUS CASES.

			0—5	6—10	11—15	16—20	21—25	26—
Male,	—	2	3	—	3	10
Female,	—	1	3	2	3	14

NON-PULMONARY.

Male,	...	...	6	4	1	1	1	1
Female,	...	...	2	2	2	1	—	2

The social side of the treatment was not forgotten, and an enjoyable series of concerts was sustained throughout the early spring and winter months.

Encephalitis Lethargica.

22 cases were admitted; 15 were discharged; and 6 died; leaving 1 case in residence at the end of the year. In 7 cases the diagnosis was not confirmed, and 1 case admitted as pneumonia and 1 as meningitis were diagnosed as encephalitis. Of the 17 proved cases, 1 remained in hospital at the end of the year, 11 were discharged, and five died.

CORRECTED DIAGNOSIS.—Negative, 4; tubercular meningitis, 1; cerebellar hæmorrhage, 1; and acute anterior poliomyelitis, 1.

DISCHARGES.—Of the 16 discharges and deaths, 5 were female and 11 male. Their ages ranged from 14 to 70 years. Analysis of the initial symptoms gave the following:—Headache, 12; diplopia, 7; vomiting, 6; delirium, 5; insomnia, 3; character changes, 2; gastrointestinal disturbance, 2; lethargy, 1; vertigo, 1, and general pains, 1.

FATAL CASES.—Five in number. Varying groups of clinical manifestations were exhibited from time to time during the course of the cases. It could not be said that any one type predominated in any particular case. The commonest groups of symptoms found were the hyperkinetic and ophthalmoplegic. (*Barker L.F. Arch. of Neurol and Psychiat.*) In every case there was pyrexia. Lumbar puncture was unsuccessful in one case, but in all others fluid was obtained. In one case this gave fixation of complement with syphilitic antigen, and on the assumption that luetic infection was the cause of the symptoms suitable intravenous therapy was tried, but with no effect on the

progressive nature of the case. In no case were any organisms found in the fluids examined. The blood showed in each case a leucocytosis. Post-mortem examination was carried out in two cases. In these the meninges were intensely congested and the vessels engorged. In one case the pia mater was much thickened. The brain substance was soft, and showed intense congestion. Definite punctiform hæmorrhages were scattered throughout the substance of the cerebral hemispheres.

NON-FATAL CASES.—What has been said before regarding multiplicity of type of symptoms applies in these cases also. One can but note the presence or absence of certain features, rather than attempt to describe the cases as a whole. Pyrexia was present in seven cases. The cerebro-spinal fluid in five cases showed increased cell content. Changes in the fundi were observed in three cases. Four of the cases presented few or no clinical appearances, and might be described with the *formes frustres* (*Ministry of Health Report*). The remaining seven manifested symptoms (*M'Nalty*) as follows:—

Type 2—Clinical affections of 3rd cranial nerves, ...	3
Types with evidence of spinal lesion, ...	2
Affections of brain stem and bulb, ...	1
Affections of the long tracts, ...	2
Types with possible involvement of peripheral nerves, ...	1

These cases were improved on discharge, but were not followed up, and therefore one cannot speak with knowledge as to whether the improvement is temporary, as it often seems to be, or permanent.

Pneumonia.

Four cases were in hospital at the beginning of the year; 132 were admitted, 100 were discharged, and 33 died, leaving 3 cases in residence at the end of the year. The fatality rate was 35·4 per cent.

CORRECTED DIAGNOSIS.—Of the 132 cases admitted, 7 were wrongly diagnosed, the corrected diagnosis being as follows:—Bronchitis, 3; pulmonary tuberculosis, 1; encephalitis, 1; and negative, 2.

FATAL CASES.—Of the 33 fatal cases, 13 were over 14 years of age and 20 were under this age. In the former age group the average age was 40 years, and the average period of residence 15 days. Four of the cases occurred during the course of influenza. Four were lobar in type and the rest were lobular. Complications occurred as follows:—Nephritis, 1; bronchitis, 2; empyema, 1; and myocarditis, 1. In the cases under 14 years of age, the average age was 2·5 years and

the average number of days' residence 19.5. Seven of the cases occurred directly as a complication of measles, and one as a complication of pertussis. In only one case was the pneumonia of lobar type. Ten of the cases showed marked evidence of insufficient nourishment.

NON-FATAL CASES.—The average age of the 36 over 14 years of age was 28 years, and their average residence period 32.5 days. All except three were of the lobar type. Complications and sequelæ occurred as follows:—Empyema, 6; influenza, 1; cardiac, 1; and bronchiectasis, 2.

Of the 57 cases under 14 years of age, the average age was 4 years and the average residence 28 days. 39 cases were of the lobular type and 18 of the lobar type. In 9 cases the pneumonia followed on measles, and in 5 it followed pertussis. Complications:—Empyema, 2.

Erysipelas.

There was 1 case in residence at the beginning of the year; 11 cases were admitted, 10 were discharged, and 2 died.

CORRECTED DIAGNOSIS.—One case proved to be cellulitis of leg.

FATAL CASES.—One of the deaths was a person of 70 years of age, with facial erysipelas and cardiac disease. The other was a middle-aged woman, with an extensive area affected on the leg. This was followed by a widespread subcutaneous suppuration. She suffered from chronic nephritis.

RECOVERED CASES.—Of the 9 recoveries, the face was affected in 5 cases, the leg in 3, and the arm in 1. One case was complicated by varicose ulceration and one by abscess formation.

Puerperal Fever.

Nine cases were admitted; 8 recovered and 1 died.

Of the 9 cases, only 3 were curetted after admission to hospital. The rest were treated by intra-uterine douche, nursed in the Fowler position, and, one might say, were to a certain extent "left to Nature." Of the 9 cases, 6 were conducted by doctor and midwife together, and the remaining 3 by midwife alone. One of the recovered cases suffered from abdominal sepsis, and at operation both ovaries, with practically all the adnexa, were removed. She made an uninterrupted recovery. Phlegmasia alba dolens occurred as a complication in 3 cases.

Meningitis.

Four cases were admitted; 1 which proved to be encephalitis lethargica was discharged, and the remaining 3 died. One case admitted as encephalitis lethargica proved to be meningitis and had a fatal result.

One case was moribund on admission, and died after a residence of nine hours. The average residence period of the other cases was seven days.

Cerebro-spinal fluid was obtained in each case and submitted to bacteriological examination. In no case was a bacterium found. Further examination by animal experiment revealed in one case the presence of tubercle bacilli. The other cases were still negative.

Measles.

13 cases were admitted; 12 were discharged; and 1 died. In addition two cases admitted as scarlatina were diagnosed as measles, and both recovered.

Four of the cases were adults, the remainder being children of an average age of 4·6 years. One case was complicated by suppurative adenitis but the remainder were uneventful.

Pertussis.

13 cases were admitted; 12 were discharged; and 1 died. All of the cases were children, the average age being under two years. The average period of residence for the recovered cases was 57 days. None of the cases showed any complications. Treatment by intra-muscular injection of æther purificatus, B.P., was adopted in some of the cases, but no effect was observed in diminishing the severity or frequency of the spasms. The injections were well tolerated and were not in any case followed by local necrosis, a point reported by some workers.

Venereal Disease.

The new patients during the year numbered 25 and are classified according to districts and disease as follows:—

		Syphilis.	Gonorrhœa.	Dual Infection.	Non-Venereal.
Lower Ward, -	{ M.	1	1	—	—
	{ F.	1	1	—	—
Middle Ward,	{ M.	2	3	—	2
	{ F.	1	—	—	—
Glasgow, -	{ M.	4	3	—	—
	{ F.	2	—	—	—
Other areas, -	{ M.	—	1	1	—
	{ F.	1	1	—	—
		12	10	1	2

The total number of attendances was 512. These cases came from the following constituent authorities:—Lower Ward, 120; Middle Ward, 58; Glasgow, 310; and other areas, 24.

Ambulance Work.

		Runs.		Miles.
Admissions,	- -	551	...	4,960
Dismissals,	- -	173	...	2,638
Other runs,	- -	225	...	1,909

Grounds and Buildings.

The main feature of the year was the installation of a new electricity plant. Formerly, the electricity was generated by engine but now the supply is derived from the Clyde Valley Electrical Power Company. The lighting voltage is 250, and the laundry machinery is run by motors working on a voltage of 440. One of the existing steam engines has been retained and a spare motor installed. Thus, in the event of a breakdown on the company's system, it will be possible to supply lighting to all the hospital buildings.

The shafting and belting of the laundry machinery was overhauled and renewed.

Staff.

The indoor staff at the end of the year comprised 1 physician, 1 matron, 4 sisters, and 21 probationer nurses. In addition there were 12 maids and 1 cook.

The outdoor staff comprised 1 mechanic, 2 assistant mechanics, 1 gardener, and 1 chauffeur.

The health of the staff throughout the year was very satisfactory.

TABLE A.

Admissions and discharges, and number of patients in Hospital at the beginning and end of year, classified according to the disease notified.

Disease.		In Hospital Jan. 1st, 1924.	Admitted.	Discharged. Recovered.	Died.	In Hospital. Dec. 31st, 1924.
Scarlet Fever,	...	34	278	265	5	42
Diphtheria,	...	4	82	74	5†	7
Tuberculosis,	...	20	83	80	5	18
Pneumonia,	...	4	132	100	33†	3
Erysipelas,	...	1	11	10	2	—
Puerperal Fever,	...	—	9	8	1	—
Epidemic						
Encephalitis,	...	—	22	15	6†	1
Meningitis,	...	—	4	1	3	—
Measles,	...	—	13	12	1	—
Pertussis,	...	—	13	12	1	—
Others,*	...	1	12	13	—	—
		64	659	590	62	71

* Marasmus, 4; Blepharitis, 1; Impetigo, 3; Influenza, 2; Pediculosis, 1; In with Mother, 1.

† Seven of these Deaths were excluded in calculating the fatality rate, as previously explained in the text.

TABLE B.

Cases Classified according to constituent districts.

Disease.		Lower Ward, Lanark.	Middle Ward, Lanark.	City of Glasgow.	Rutherglen Burgh.
Scarlet Fever,	...	63	156	59	—
Diphtheria,	...	31	42	9	—
Tuberculosis,	...	77	4	—	3
Pneumonia,	...	44	40	48	—
Erysipelas,	...	4	4	3	—
Puerperal Fever,	...	3	6	—	—
Epidemic					
Encephalitis,	...	6	13	3	—
Meningitis,	...	3	1	—	—
Measles,	...	8	5	—	—
Pertussis,	...	2	11	—	—
Others,	... ..	11	—	—	—
		252	282	122	3

ENTERIC OR TYPHOID FEVER

Review of the Prevalence during the
Period 1891-1924 in the Three Wards
or Sanitary Districts of the County of
Lanark.

BY

JOHN T. WILSON, M.D., D.P.H.

COUNTY AND DISTRICT MEDICAL OFFICER OF HEALTH
FOR THE COUNTY OF LANARK, 1894-1924.

COUNTY OF LANARK—MEDICAL STAFF.

1891-1924.

Years.				County Medical Officers.
1891-1894,	-	-	-	JAMES M'LINTOCK.
1894-1924,	-	-	-	JOHN T. WILSON.
				Assistant Medical Officers.
1896-1901,	-	-	-	ALEXANDER ROBB.
1899-1902,	-	-	-	ANDREW J. LAIRD.
1901-1904,	-	-	-	JOHN J. BUCHAN.
1902-1906,	-	-	-	A. LEDINGHAM.
1904-1909,	-	-	-	JAMES A. HISLOP.
1906-1908,	-	-	-	W. L. THOMSON.
1908-1909,	-	-	-	E. WATT.
1909-1911,	-	-	-	JOHN F. MACDONALD.
1910-1912,	-	-	-	JOHN A. WATT.
1911-1920,	-	-	-	F. H. SCROGGIE.
1912-1913,	-	-	-	D. STEWART.
1913-1918,	-	-	-	J. W. MILLER.
1913-1920,	-	-	-	J. R. ADAM.
1913-1919,	-	-	-	ROBERT RICHARDS.
1913-1924,	-	-	-	J. T. DICK.
1913-1916,	-	-	-	C. BARROWMAN.
1918-1922,	-	-	-	JAMES JOHNSTONE.
1919-1924,	-	-	-	J. M'CALLUM LANG.
1919-1924,	-	-	-	J. R. SUTHERLAND.
1920-1924,	-	-	-	JOHN A. C. GUY.
1920-1924,	-	-	-	ALEXANDER FRASER.
1922-1924,	-	-	-	JOHN P. CRICHTON.
				Bacteriologist and Assistant Medical Officer.
1907-1924,	-	-	-	J. HUME PATTERSON.

Enteric or Typhoid Fever.

REVIEW OF THE PREVALENCE DURING THE PERIOD 1891-1924, IN THE
THREE WARDS OR SANITARY DISTRICTS OF THE COUNTY OF LANARK.

The prevalence or absence of enteric fever has for many years been looked upon as an important indication of the sanitary conditions prevailing in certain communities. In so far as sanitary measures aim at promoting cleanliness this is more or less true to-day. The figures in the undernoted Table A1, showing the prevalence of enteric fever throughout the County, stated as the average annual number of cases occurring in each quinquennial period, bear a close relationship to the development of public health administration. A progressive diminution is recorded. During the first five years (1891-5) the disease in the County was much more prevalent than in any community with its public health functions well organised. In order to understand the relation between the one and the other let us consider (1) some medical aspects of the disease; (2) the sanitary conditions which existed when the County Councils and District Committees began to function; and (3) the measures available for controlling infection.

TABLE A1.

AVERAGE ANNUAL NUMBER OF CASES OF ENTERIC FEVER IN THE
THREE COUNTY SANITARY DISTRICTS SHOWN IN QUINQUENNIAL
PERIODS.

Sanitary District and Population (1911 Census).	1891 to 1895	1896 to 1900	1901 to 1905	1906 to 1910	1911 to 1915	1916 to 1920	1921 to 1924
Middle Ward (Pop., 202,663)	465	347	295	205	113	85	62
Upper Ward (Pop., 42,978)	47	27	21	13	6	3	1
Lower Ward (Pop., 56,974)	48	48	41	40	*11	5	2
County (Pop., 302,615)	560	422	357	258	130	93	65

* The Glasgow Boundaries Extension of 1912 absorbed practically one-half of the total population of the Lower Ward District, including practically all the urban population.

(1) *Medical Aspects*.—Enteric or typhoid fever was in the year 1890 not sufficiently recognised as an infectious disease capable of being conveyed directly from the sick to the healthy. This is all the more surprising when we find medical literature dealing with the subject containing some convincing evidence that typhoid fever is a self-propagating infectious disease. William Budd, M.D., F.R.S., medical practitioner in and around Bristol and also a lecturer in medicine, investigated a number of outbreaks of the disease in country districts near Bristol, and in a volume issued in 1857 these outbreaks are fully reported upon. He points out the infectivity of the intestinal discharges, and the danger of conveying the infection through the faulty disposal of such discharges.* The views so ably expressed by Dr. Budd, and taught in his lectures to students, seem not to have met with general acceptance and approval, as we find defective water supplies and defective drainage still form the chief topics of discussion in reports of outbreaks of the disease. Charles Murchison, M.D., LL.D., F.R.S., took a different view, and the teaching was general that enteric fever was not directly infective. In a little brochure on epidemics, published in the year 1866, Dr. F. E. Anstie states, "All observers arrive at the conclusion that it would be possible, by rendering our drinking water absolutely pure, and by disinfecting our sewage at the earliest possible moment, almost entirely to suppress typhoid fever."

In 1895 the Editor of the *British Medical Journal*, Ernest Hart, D.C.L., prepared a report at the request of the Parliamentary Bills Committee of the Association. This report appeared weekly in the *British Medical Journal* in 1895, and was, in the year 1897, issued as a separate document, with the title, "Water-borne Typhoid: A Historic Summary of Local Outbreaks in Great Britain and Ireland, 1858-1893." In a tabular statement in the Appendix to this report Dr. Hart gives an analysis of 205 epidemics. Although the specific germ was discovered in 1880, yet in this report it is stated that

* Under the heading, "Media of Transmission—Tainted Hands, Tainted Linen, Bedding, and Clothes," Dr. Budd states:—"Among the poor, and in ways that will suggest themselves, and need not be more particularly described, there is reason to believe that this mode of communication (the tainted hands of those who wait upon the sick) often has a large share in spreading the disease through the family circle. Passing from the hand to other things, under contingencies that are not only very conceivable, but are sure now and then to occur, the contagion thus arising may sometimes have a much wider scope. I possess evidence which renders it in the highest degree probable, that milk and butter, especially, may become infected in this way. Linen, wearing apparel, bedding, and other porous fabrics, tainted with fever, constitute another important vehicle."

enteric fever "can be thought of as having in some measure been kept going by the poisoning of air by the sewage-saturated ground." In one outbreak cases are related to specifically infected midden privies and poisoned air. In dealing with milk epidemics the heading is "Water-infected Milk and Typhoid Fever," inferring that the milk, in order to become infective, must be contaminated with infected water. The report refers to actual instances in which "disease has been traced to milk infected with the specific germ of typhoid fever by the agency of polluted water."

Most of the cases summarised in Dr. Hart's report were those investigated by medical inspectors of the English Local Government Board. The report was no doubt valuable in arousing Local Authorities to the need for water supplies being free from contamination, but with the information now available as to the various means by which the disease is spread, I feel sure that many of the findings in the report can be adversely criticised. Indeed, early in the year 1904, Alexander Collie, M.D., who had a large experience in the treatment of enteric fever in one of the hospitals of the Metropolitan Asylums Board, having had a number of the nursing staff and even outside staff who contracted the disease in the course of their ordinary duties, published a report on the subject. The preface states "the object of the observations contained in this monograph is to show cause for a revision of our views on the etiology of enteric fever. The writer's aim is to demonstrate that enteric fever is an infectious disease, communicable by direct personal intercourse, just as typhus fever is; and that explanations of its origin from drinking water have, in several instances, failed in the ablest hands." Dr. Collie criticises three of the outbreaks referred to in Dr. Hart's report, and shows how the water-borne theory was not correct. I would like here to refer to two of the outbreaks:—

No. 77 in the Appendix to Dr. Hart's report, at Crosshill, Renfrewshire, which was investigated by Dr. H. D. Littlejohn and Dr. E. Duncan. Although typhoid fever was very prevalent in the village of Eaglesham, near which Crosshill Farm is situated, and two of the farmer's children had suffered from the disease, there is good reason to believe that, the actual disease being in the dairy farm, the milk could have been infected directly without the intervention of the water supply.

No. 111.—An outbreak occurred affecting the City of Glasgow and neighbouring County area, in which 600 cases with 80 deaths were

reported. The dairyman sickened with fever in March. Subsequently two of his children took ill, also a girl staying one night at the farm, and helping to nurse her sister. On the day after the children sickened the milk proved infective. This was again put down to water supply, which was no doubt defective.

In "The Sanitary History of Glasgow," published in 1895, Dr. J. B. Russell states—"The history of enteric fever in Glasgow, therefore, leads to these notable conclusions—(1) that her epidemics have all been milk-borne; and since in the first alone was the infection acquired locally (from the milking of the cows in a city byre by a mother nursing children who had enteric fever), and in all the others demonstrably through defective water supply, bad drainage, and other defects at the source of supply in the country; (2) that the status of enteric fever in Glasgow mainly depends upon rural sanitary administration."

Fred Dittmar, M.A., M.D., Medical Inspector under the Local Government Board for Scotland, in 1911 published a report "On the Incidence of Enteric Fever in the Larger Towns of Scotland," where, among conclusions come to, No. 2 might be quoted:—

"From the experience of towns in the West of Scotland, it may be inferred that conservancy methods of dealing with human excreta favour the spread of enteric fever. This is largely due to the opportunity provided by conservancy methods for repeated reinfection of the soil in the neighbourhood of dwelling-houses, and the opportunity thus given for infection of food by flies and other natural agencies."

To-day no infectious disease is better understood as to its means of causation and prevention than enteric fever. Since the germ was discovered in 1880, and more especially since 1890, bacteriological investigations have been carried out that explain many phenomena observed from the clinical and pathological history of the disease. Enteric fever is now admitted to be directly communicated from the sick to the healthy, as the County records will show, and easily conveyed by milk, water, and foodstuffs; shellfish, fried fish, and ice-cream have been especially suspected. The infection is given off freely in the intestinal discharges from the very onset of the symptoms of the disease, if not before, and the specific germ is found in the blood and various internal organs.

The Goulstonian Lectures,* delivered in the year 1900, contain some valuable information, based on practical experience, and the following quotations from the abstracts might be permitted:—

“(1) In regard to the typhoid bacillus as a saprophyte, we must allow that so far there was no proof that the typhoid bacilli could multiply outside the human body.

“(2) *The Excretions*.—There are four excretions which have been described as infectious with more or less frequency—the sweat, the expectoration, the faeces, and the urine. At present there is no evidence to show that the bacilli do occur in the sweat, but we should always look upon the expectoration in the case of typhoid fever, if there be any, as a possible means of spreading the disease, and should take measures accordingly.

“(3) *Typhoid Bacilluria and Cystitis*.—In London, then, at all events, it will probably be correct to say that at least 25 per cent. of all cases present this serious and dangerous condition.

“(4) *Conclusions*.—We can no longer regard typhoid fever as purely a disease of the intestines. In ordinary cases, indeed, the intestinal lesions form the starting-point of the disease, but rapidly the bacilli become generalised, and a septicæmic condition ensues, the micro-organisms being found in the most varied portions of the body, and not uncommonly in the blood itself. Secondly, this septicæmic condition may occur without any obvious lesion of the intestinal tract. In some cases, too, both of the ordinary intestinal variety and of those without intestinal lesions, the stress of the disease may fall with special severity on one of the internal organs—for example, the meninges or the kidneys—so that the terms ‘meningo-typhoid’ and ‘nephro-typhoid’ † may actually represent a pathological fact.”

In the year 1921, Dr. Hamer, ‡ referring to the views held during the last seventy-five years with regard to the nature and source of infection of typhoid fever, as well as the preventive measures, makes no reference to Dr. Budd’s opinions and expressed views, and sums up his experience as follows in the last paragraph:—

“It is submitted that a bird’s-eye view yields unmistakable indication that, at any rate during the last twenty-five years, the mischief responsible for London typhoid has been traced either to some remote estuary or to some far-distant foreshore.”

(This, of course, refers to the dissemination of the disease by infected shellfish.)

* These lectures were delivered before the Royal College of Physicians of London by P. Horton-Smith, M.A., M.D.(Cantab.), F.R.C.P.(Lond.), Assistant Physician to the Brompton Hospital for Consumption and to the Metropolitan Hospital, Assistant Medical Tutor to Bartholomew’s Hospital.

† We have encountered a case of “nephro-typhoid” in the Middle Ward of Lanarkshire.

‡ W. H. Hamer, M.A., M.D., F.R.C.P., D.P.H., Medical Officer of Health of the County of London, President of the Metropolitan Branch of the Society of Medical Officers of Health.

In our own experience, doctors, nurses, and people living in good circumstances, with all modern sanitary conveniences, have been infected. In Dalserf Parish, an experienced medical practitioner had to visit cases of enteric fever in miners' dwellings. One patient of his, a woman, was seriously ill, and shortly after examining this case he himself sickened with the disease, and was treated in hospital, where he made a good recovery. In another instance a young practitioner in Calderbank district, where the disease was very prevalent in 1899, was infected, went home to Ayrshire, and died. Among the staff of sanitary inspectors, two, in the course of their visits to infected homes to make inquiries, and to arrange for removal to hospital of patients and for disinfection, contracted the disease, but both made a good recovery. Neither were the hospital staffs immune. Dr. Lewis Thomson contracted the disease, and was seriously ill, while in charge of the County Hospital, Motherwell, and during a period of twelve years no fewer than 40 nurses in the County Hospital, Motherwell, and in Lightburn Joint-Hospital, Shettleston, were infected, of whom 8 died. It is well known that bacteriologists working with enteric smears are liable to infection. In a very important institute in London, through an accident to one of the machines, the infection was scattered among the staff, and several went down with the disease. Similarly, in the Lanarkshire County Laboratory, the bacteriologist (Dr. J. Hume Patterson) was infected through a mishap to a bottle containing a specimen of typhoid faeces.

(2) *Sanitary Conditions.*—These varied throughout the County, but the conditions under which the working classes lived were very unsatisfactory. Midden privies for the reception of excremental refuse, open channels for the disposal of slops, and water supply—even where a gravitation supply was available—from well-hydrants, situated in the street or in the courtyard, were the common arrangements provided. Midden privies are the most abominable structures ever devised for the disposal of excremental refuse. They were usually placed in the back courts, where the children run and play, and the children were to be seen on a warm summer day, with their bare feet, coming in contact with deposits of excrement. These midden privies were not fit for women or children to use, so that defecation by the children was made around the midden, and by the women in chamber-pots. Fully 50 per cent. of the cases of enteric fever occurred among children under twelve years of age. No doubt one has to admit that there is a personal factor. It is possible in country districts, even with such defective sanitary arrangements, to avoid the spread of

infection, but in a community where the class is migratory, and of a low standard of cleanliness, the disease will become endemic under the conditions described.

One can picture the difficulties under which a housewife had to carry on her work. In some areas the houses were of two storeys, where the domestic water had to be carried up the stair, and the slop water carried down, although sometimes the housewife might be tempted to throw the latter over from the stair landing, if outside. Did a case of illness occur, say in a child of the family, the mother, in addition to performing her usual household and culinary duties, had also to act as nurse. A doctor might be called in, but the symptoms of enteric fever are in many instances so indefinite that the true nature of the illness might not be diagnosed; thus a patient might lie for a week or longer, nursed and cared for under these trying conditions. The patient is too ill to go outside to relieve nature, and so a chamberpot is used. Think of the liability of soiling of the fingers of the mother! Think also of the condition of the patient's body, the bed linen, &c., under such grossly insanitary conditions as I have described! Here there were no water-closets, no slop sinks, with hot and cold water constantly available for cleansing the hands. Is it to be wondered at that the contagion of enteric fever was readily spread once it was introduced to a household?

(3) *Measures available for controlling Infection.* — Compulsory notification was in force throughout the County in 1891, in the Middle Ward for the whole year, and in the Upper and Lower Wards for part of the year. The staff for investigating outbreaks of infectious disease in the earlier years consisted of six assistant sanitary inspectors in the Middle Ward, one inspector in the Upper Ward, and two assistants in the Lower Ward. An Assistant Medical Officer of Health was appointed in 1896, and a second assistant in 1898. Prompt recognition of a case of infectious disease, isolation in hospital, and disinfection of the dwelling, articles of clothing, &c., were the immediate recognised methods of seeking to control the disease. Investigation of the source of infection in each case was most important. The information collected by the inspectors and the action taken by them were carefully considered by the Medical Officer of Health, and such further action taken as was thought necessary.

The hospital accommodation available in 1891 was very meagre. The County Authorities had only two hospitals—both in the Middle Ward—which they owned, one at Bellshill and one at Blantyre.

They had also a joint-share in combination institutions with the Burghs of Coatbridge, Govan, Hamilton, Lanark, and Wishaw, so that the total bed accommodation thus available amounted to about 80 beds. New hospitals were provided as quickly as possible, and by the year 1897 the total bed accommodation amounted to 204 in the Middle Ward, 16 in the Upper Ward, and 30 in the Lower Ward—total, 250 nominal beds.

To assist in recognising disease and infection it was necessary to have a bacteriological laboratory where specimens could be examined. This was provided in the year 1900, and was originally manned by one of the medical assistants, first Dr. Ledingham and then Dr. Hislop. It was with difficulty, however, that medical practitioners and the public generally could be made to avail themselves of these arrangements.

Even with all these facilities it was of the greatest importance to improve the general sanitation. Public water supplies had to be provided, and a completely new scheme was introduced for the whole Middle Ward, the existing schemes being also extended. Piping had to be laid, and, although the main pipes were in use by the year 1897, the work of extension continued year by year. For example, in ten years, in the Middle Ward District, as many as 100,000 yards or thereby of piping are recorded by the Water Engineer as having been laid; now there is hardly a house but has gravitation water supply, carried within the dwelling or readily available.

Special Drainage Districts had to be formed, and suitable means of drainage and sewage disposal had to be provided. During the period 1891-1895 eleven such districts were formed, and during the succeeding quinquennial period—namely, 1896-1900—no fewer than eight were formed.

Lastly, Special Scavenging Districts, the formation of which were authorised by Section 44 of the Local Government (Scotland) Act 1894, were formed; but, as these last two measures were of an adoptive character, the improvements were only accomplished gradually. Two such districts were formed in the year 1895, and by the year 1911 twenty-three districts had been formed, embracing most of the populous localities in the County—Blantyre, Baillieston, Bothwell, Uddingston, Bellshill, Mossend, Holytown, New Stevenston, Carluke, Douglas, Lesmahagow, Bishopbriggs, Chryston, Stepps, and Rutherglen. The very beneficial effects of the formation of these Special Districts in the Middle Ward is reflected in the following Table, A2, which shows that up to the year 1924 no fewer than 3,537 privies in the Middle Ward District have been abolished, water-closets having been provided in lieu.

TABLE A2.

The following statement shows the number of privies which existed in Special Scavenging Districts in the Middle Ward prior to the formation of same, the number since abolished, water-closets having been provided in lieu, and the number still to be abolished :—

District.	Privies.	Abolished.	Still in Existence.
Aitkenhead, &c.,	87	21	66
Baillieston,	145	99	46
Bellshill, &c.,	382	375	7
Blantyre,	251	251	—
Bothwell,	100	96	4
Busby,	—	—	—
Calderbank,	75	—	75
Cambuslang,	212	212	—
Carmyle, &c.,	50	36	14
Cleland, &c.,	260	91	169
Dalziel, &c.,	30	22	8
East Kilbride,	34	34	—
Gartlea,	4	2	2
Glengowan, &c.,	92	—	92
Hamilton Road,	—	—	—
Holytown, &c.,	185	157	28
Larkhall,	868	833	35
Newarthill,	112	19	93
Newmains,	246	246	—
Salsburgh,	56	15	41
Shotts, &c.,	717	400	317
Stonehouse,	180	64	116
Strathaven,	460	460	—
Uddingston,	102	102	—
Waterloo, &c.,	169	2	167
	4,817	3,537	1,280

Such, then, is a brief summary of the means which existed in the earlier years and those that now exist; but let me here refer to a preventive measure of a different nature, namely, vaccination against typhoid fever. During the nineties it was discovered that a vaccine could be prepared with dead cultures of the bacillus typhosus, and during the South African War this was used, but only to a moderate extent and in a somewhat haphazard way, which gave rise to a discussion as to the merits of this vaccine as a preventive measure. In the year 1906 inquiries were made at some authorities on the subject, and in a communication which I had from Sir Almroth E. Wright, dated December, 1906, he referred to some recent publications, all of which were favourable to inoculation. Personally, he did "not doubt that you would reduce the incidence of the disease in your staff to the vanishing point by inoculation." He stated further:—"It seems clear from the recent army results that the effect of inoculation is not exhausted in four years." It was not until 1908, however, that the vaccine was on sale, prepared by the Lister Institute. A supply was then obtained for the inoculation of those nurses engaged in the enteric fever wards. In the following year there had been no less than five nurses in Lightburn Hospital who sickened with enteric fever, and one died. Altogether, since the opening of the County Hospital, Motherwell, and the Lightburn Joint-Hospital, 40 nurses had sickened with the disease, and 8 of these had died. This was most disheartening, and an effort was made, first in a voluntary way, to induce nurses to agree to vaccination, a commencement being made with the staff at Lightburn. Unfortunately, the ward sister there was of a somewhat nervous disposition, and she resented such treatment. It was then agreed that the outdoor staff should try the effects of the vaccine, myself included. Detailed notes of the effects were carefully recorded, and here is one of those records, which might be taken as typical of all:—

"J.W., Age 53. *First Inoculation*.—Dose, $\frac{1}{3}$ of a thousand million, about 5.30 p.m. Within one hour slight giddiness and sense of fullness in the head, slight local pain. First night slept well. Next morning distinct local reaction, very painful upon movement, unable to lie on affected side, area of redness 1 by $1\frac{1}{2}$ inches, malaise and slight impairment of appetite, pulse and temperature normal. Second night slept well. Third day quite well, slight local tenderness, but redness almost gone.

"*Second Inoculation*.—Interval one week. Dose, $\frac{1}{3}$ of a thousand million, about 5.30 p.m. Within four hours lassitude produced, temperature 100, pulse 80. First night sleep disturbed. Next morning still unwell. Temperature in the evening 99. Third day quite well.

"*Third Inoculation.*—(New supply of vaccine.) Dose $\frac{1}{2}$ of a thousand million about 1 p.m. Within four hours marked malaise and local pain. First night sleep disturbed. Next morning kept bed. As the day wore on signs and symptoms became more severe. At 5 p.m. on second evening temperature 101, pulse 80, more comfortable. Slept from midnight to 7 a.m. Third day weak and unfit for work; felt as if had gone through a febrile illness. Fourth day gradually recovering and almost fit for duty.

"Blood tested for agglutination on second and seventh days with negative result. On the ninth day a positive result was obtained, and continued positive up to the last blood examination made 132 days after inoculation."

The inoculations were carried out by Dr. Ernest Watt, and since there were no serious after-effects we decided to insist upon all nurses being protected by inoculation before undertaking duty in the enteric wards. It will be noted that the Widal's test was positive in all these cases recorded.

Table A3 will show the beneficial results obtained from inoculation of the staff. Since inoculation was commenced, there has been only one death recorded from the disease among the nursing staff at Lightburn Hospital. Regarding the two cases of illness which occurred in the County Hospital, Motherwell, Dr. Reid supplies the following notes:—

"Nurse L.—Inoculated December, 1920, T.A.B. vaccine (Lister). Complained of headache and pains in limbs, 6/5/21. Went through a mild attack of enteric fever. Temperature round about 100 for five days, then gradually subsided. Beyond slight looseness of bowels for a few days she had no abdominal signs. On 22nd May, 1921, the Widal * reaction was positive; blood culture was negative.

"Nurse H.—Inoculated December, 1920, and January, 1921, T.A.B. vaccine, three doses (Lister). Widal's all negative. Onset 4/4/21, headache and dizziness. This case ran a swinging temperature for three weeks. She was always quite comfortable, and had no abdominal symptoms. The Widal's reaction to typhoid was positive on 24/5/21.

* Negative to typhoid and Para. A.; positive to Para. B.

TABLE A3.—TYPHOID FEVER.

Year.	COUNTY HOSPITAL, MOTHERWELL.			Year.	LIGHTBURN JOINT-HOSPITAL, SHETTLESTON.		
	Patients admitted.	Nurses Cases.	Infected. Deaths.		Patients admitted.	Nurses Cases.	Infected. Deaths.
From Oct.				1896	49	—	—
1897	22	—	—	1897	33	—	—
1898	216	—	—	1898	131	—	—
1899	235	2	1	1899	149	1	—
1900	145	1	—	1900	94	1	—
1901	291	1	—	1901	120	—	—
1902	160	3	1	1902	94	—	—
1903	174	1	1	1903	86	2	—
1904	112	1	—	1904	71	1	—
1905	300	5	1	1905	97	3	—
1906	214	4	1	1906	185	1	1
1907	99	—	—	1907	81	2	1
1908	131	3	—	1908	73	1	—
1909	109	—	—	1909	74	5	1
1910	148	—	—	1910	54	—	—
1911	122	—	—	1911	44	—	—
1912	106	—	—	1912	18	—	—
1913	126	—	—	1913	19	—	—
1914	92	—	—	1914	16	—	—
1915	114	—	—	1915	11	—	—
1916	95	1	—	1916	16	—	—
1917	92	—	—	1917	2	—	—
1918	105	—	—	1918	20	—	—
1919	118	1	—	1919	5	—	—
1920	59	—	—	1920	18	1	1
1921	107	—	—	1921	3	—	—
1922	49	—	—	1922	—	—	—
1923	61	—	—	1923	3	—	—
1924	35	—	—	1924	—	—	—

MIDDLE WARD DISTRICT.

Statistics showing the incidence of the disease in the Middle Ward District have been summarised in quinquennial periods in the following table :—

TABLE B1.**AVERAGE ANNUAL INCIDENCE OF ENTERIC FEVER IN EACH PARISH.**

Parish and 1911 Census Population	1891 to 1895	1896 to 1900	1901 to 1905	1906 to 1910	1911 to 1915	1916 to 1920	1921 to 1924
Avondale (5,033)	2	7	3	—	—	2	2
East Kilbride (3,977)	4	3	2	—	—	—	—
Glasford (1,312)	3	2	2	—	—	—	—
Stonehouse (3,688)	5	2	1	1	1	—	—
Blantyre (16,821)	84	35	63	42	6	5	3
Bothwell (54,211)	103	79	80	57	32	30	16
Cambuslang (24,870)	49	44	37	30	8	2	4
Cambusnethan (14,577)	20	16	5	17	14	1	2
Dalserf (18,629)	33	61	40	8	20	27	23
Dalziel (1,876)	4	10	3	1	3	—	1
Hamilton (7,775)	17	25	7	2	1	3	1
New Monkland (13,728)	44	15	8	7	13	3	2
Old Monkland (17,742)	38	30	31	34	9	5	2
Shotts (18,434)	59	18	13	6	6	7	6
Total (202,673)	465	347	295	205	113	85	62

The incidence will now be submitted in detail for the respective parishes.

1891-1895.—During this period the population averaged about 150,000, and the average annual incidence of the disease 465 cases. An examination of Table B1 shows that *Blantyre* was the parish most seriously affected, the number of cases notified each year being 23, 116, 169, 19, and 95 respectively. In 1892 Auchentibber and Low Blantyre villages were the chief places involved in the increase.

Auchentibber, comprising some 50 houses, lies on the south-western boundary of the parish. The water supply in the village was far from satisfactory, the source being an old quarry, and wells in the gardens. Enteric fever occurred here about the end of August, 1892, continuing more or less prevalent until September, 1893: Hospital accommodation at the time was very inadequate, and most of the early cases were left to be nursed at home. Altogether 67 cases occurred in 37 families. The defective water supply was believed to have been the chief cause of the outbreak, but if contaminated water were implicated, the disease must have been kept going by personal infection.

Low Blantyre Village, famous as the birthplace of David Livingstone, lies on the north-western boundary of the parish. Here the water supply was from local sources, and the sanitary arrangements very defective. The outbreak commenced in December, 1892, and continued through the following year, the greatest prevalence being in the months of August and September, 1893. In all 77 cases occurred in 61 families. There can be little doubt that personal infection was the main agency in the dissemination of the disease.

In High Blantyre 33 cases occurred in 1892, and 15 in 1893.

In the year 1895 the incidence of the disease in Blantyre Parish was again somewhat heavy, and special inquiries and investigations were made, the result of which is fully recorded in the Annual Report, from which the following has been extracted:—

“Previous History.—The progress of the mortality from enteric fever in all Scotland has shown a marked decline during the past twenty years, and the average annual death-rate now (1895) is about 20 per 100,000 living. How very different the progress has been in Blantyre may be seen from the following table:—

PROGRESS OF ENTERIC FEVER MORTALITY IN BLANTYRE PARISH
DURING THE PAST 40 YEARS.

Decennial Periods.	Average Population.	Total Deaths.	Annual Death-Rate per 100,000.
1856-65, 	3,029	17	56
1866-75, 	3,472	22	63
1876-85, 	9,760	67	70
1886-95, 	11,352	75	65

“ Here the death-rate has risen from 56 to 70, and now averages 65 per 100,000, a death-rate fully two times greater than the average for the whole district. In Glasgow, during the last thirty years, the rate has fallen from 51 to 20.

“ It will also be observed that the period of increase in the mortality from enteric fever coincides with a remarkable increase in the population, due to the rapid development of the mining industry since 1870.

“ So far we have been dealing with mortality; but, from previous Annual Reports and other official records, the amount of sickness or morbidity can be ascertained for the past five years, and is as follows :—

CASES NOTIFIED AND DEATHS REGISTERED FROM ENTERIC FEVER IN
THE PARISH OF BLANTYRE DURING THE FIVE YEARS 1891-95.

	1891	1892	1893	1894	1895	Total.
Cases, 	23	116	169	24	95	427
Deaths, 	4	16	18	8	5	51
Percentage of Deaths to Cases, 	17·4	13·8	10·7	33·3	5·3	12

“ The total cases notified was 427, causing 51 deaths, that is 12 deaths in every 100 cases.

“ During the same period there were also 47 deaths from diarrhoeal diseases—diseases which are often in their causation closely related to enteric fever.

DEATHS FROM DIARRHOEAL DISEASES IN THE PARISH OF BLANTYRE
DURING THE FIVE YEARS 1891-95.

1891	1892	1893	1894	1895	Total.
13	4	6	10	14	47

“ These facts clearly show that during the last twenty years there has been an excessive prevalence of enteric fever in Blantyre, which shows no signs of abatement.

“ *Distribution of the Disease in Different Localities.*—The area of the whole parish is 3,954 acres, and comprises several more or less distinct localities, which, for the purpose of this inquiry, might be divided into two groups, viz., those within the special water supply district, with an approximate population of 7,700, and those outwith this district, with an approximate population of 3,652.

“ The relative prevalence of the disease and its mode of manifestation vary greatly in these two districts. The number of cases in relation to population was much greater in Auchentibber and Low Blantyre than in the other localities.

“ In the five years only 8 cases occurred in rural localities. One violent outbreak of 56 cases occurred at the miners’ rows of Auchentibber, and a similar epidemic at Low Blantyre.

“ Within the water district there has been a continuous prevalence with less tendency to epidemic explosions. To this district the incidence was chiefly confined in 1895—the year under consideration.

TABLE B2.

ENTERIC FEVER IN DIFFERENT LOCALITIES IN THE PARISH OF BLANTYRE,
ARRANGED ACCORDING TO WATER SUPPLY. CASES NOTIFIED DURING
THE PERIOD 1891-95.

Locality.	Water Supply.	Census Population,		Cases of Enteric Fever.					Total.
		1891.	1891	1892	1893	1894	1895		
Stonefield, Springwells Larkfield High Blantyre	{ Gravitation Water of Special Water Supply District }	7,700	22	68	49	20	84	243	
Low Blantyre	Private	1,400	1	17	80	3	9	110	
Auchentibber	do. ...	460	—	28	38	—	—	66	
Remainder of Parish (chiefly rural)	do. ...	1,792	—	3	2	1	2	8	
Whole Parish	—	11,352	23	116	169	24	95	427	

“ *Prevalence in 1895.*—Confining our attention to the area of the water district, where 90 per cent. of the cases occurred, we find that all portions of this district did not suffer to the same extent, nor at the same time, as may be seen from the following table :—

TABLE B3.

ENTERIC FEVER IN THE DIFFERENT LOCALITIES WITHIN BLANTYRE SPECIAL WATER SUPPLY AND DRAINAGE DISTRICT. CASES OCCURRING AND HOUSES INVADED IN EACH FORTNIGHT DURING THE PERIOD JULY TO DECEMBER, 1895.

Locality.	Estimated Population, 1891.		July 20	3	August. 17	31	Sept. 14	28	Oct. 12	26	Nov. 9	23	Dec. 7	21	Total.
Stonefield, -	4,200	{ Cases,	5	1	1	4	5	6	16	10	1	—	5	—	54
		{ Houses,	4	1	1	3	3	5	14	10	1	—	4	—	46
Springwells,	800	{ Cases,	—	—	—	1	—	—	2	1	—	—	—	—	4
		{ Houses,	—	—	—	1	—	—	2	1	—	—	—	—	4
Larkfield, -	600	{ Cases,	—	—	—	—	2	2	1	—	1	1	1	1	9
		{ Houses,	—	—	—	—	1	1	1	—	1	1	—	...	5
High Blantyre,	2,100	{ Cases,	—	—	—	1	—	1	3	—	—	2	4	—	11
		{ Houses,	—	—	—	1	—	1	2	—	—	1	2	—	7
Whole District, -	7,700	{ Cases,	5	1	1	6	7	9	22	11	2	3	10	1	78
		{ Houses,	4	1	1	5	4	7	19	11	2	2	6	—	62

“ Altogether 78 cases occurred in 62 houses; but 54 of these cases occurred in Stonefield alone. And some parts of this locality suffered much more than others—the tenement dwellings on the north side of the street being more frequently invaded than the single-storey miners’ rows.

“ We note, then, that the incidence of the disease was not evenly distributed over the water district, but located in particular properties here and there, in which it tended to spread. The epidemic reached its height in the first two weeks of October.

“ *Causes of the Prevalence in 1895.*—The milk and water supplies, drainage, and general sanitary conditions were all carefully inquired into, and will be considered in turn.

“ *Milk.*—Among the families affected, the sources of the milk supply were numerous (16 in all), and at no time during the course of the epidemic could any causal relation be traced, although at one of the principal dairies some sanitary defects were found.

“ *Water Supply.*—With the exception of a few wells still in existence, and the use of pit water by the miners while at work, the water supply is from the Special District Waterworks, which were constructed in 1881. This water is distributed throughout the district, and is mostly obtained from standpipes in the street, or from taps in back courts common to several houses. The quality of this water supply, as ascertained by chemical analysis, is to the effect that it contains ‘ a notable quantity of light vegetable matter in suspension, which should be removed by filtration, but from the results of my analysis I am of opinion that it is otherwise sufficiently pure for domestic use.’ The testimony of the consumers, who frequently

complained of the quality, is to the effect that it sometimes contains gross particles in suspension. From an examination of the source of supply, namely, the Lees Burn, one can easily account for such results and complaints, as this stream in the upper part of its course is liable to contamination by imperfectly irrigated sewage and the drainage of manured fields. The water from the burn flows into the reservoir direct, and, after passing through several gauze screens at the outlet, goes into the distributing main without filtration.

“During the month of July the supply, owing to the continued drought, ran short, and was supplemented by water from a pit. The period of temporary supply, after making due allowance for the development of enteric fever, does not coincide with the period of prevalence of the disease, so the pit water may be excluded as a cause thereof.

“But can we speak so of the permanent supply? The disease-producing power of such a water supply as that above described may manifest itself in two ways—by a chronic autumnal prevalence of diarrhoeal diseases, and epidemic outbursts of enteric fever, when contaminated with the specific contagion of that disease. In such epidemics the area invaded coincides with that of the water supply. Now, a marked feature of the epidemic under consideration was its tendency to localisation. Even in Stonefield, where it was most prevalent, whole streets of houses supplied by this water escaped altogether, and no local contamination of the water mains could be detected. Owing to the distribution of the cases, we conclude that the water supply was not the actual or exciting cause of the disease, but was, nevertheless, a menace to the public health, and may have predisposed those who partook of it to an attack of enteric fever.

“*Drainage.*—All the houses have drains, which in many private streets and lanes consist of open channels alongside the footpaths or between the rows of houses. In such drains the ground level openings were not always trapped, but no serious nuisance arising therefrom could be detected near the dwellings. Where pipe drains existed they were not disconnected from the sewer or ventilated, but with one or two exceptions had no communication with the interior of the dwellings.

“*General Sanitary Condition.*—The houses consist mainly of two classes, single-storey miners’ rows or tenement property. The dwellings, although not comparable to miners’ houses more recently erected elsewhere, were on the whole comfortable, and situated in an open country district.

“Facilities for cleanliness were, however, sadly wanting. The water had to be carried from the street, in some instances a hundred yards or so. There were few houses with sinks inside, even in two-storey tenements, and those that were on the stairhead or basement, and common to several families, were offensive and not trapped off from the drain. The back areas and front entrances were unpaved, so that in wet weather the surroundings of the dwellings were a perfect puddle-hole. What was worse, this puddle-hole was frequently saturated with human filth, through that method of excrement disposal

known as the common privy-midden. These conveniences (!) have been so frequently referred to in previous Annual Reports of Dr. M'Lintock that it is almost needless for me to speak of the nuisances they are capable of giving rise to. At many of the properties invaded by enteric fever they were seen in all their loathsomeness.

"Placed sometimes within 15 yards of the dwelling, generally to the rear, but occasionally right in front of the only entrance to a house, was the receptacle for all the excretal filth of a dozen or more families. This was of such a capacity that it could contain the deposits which might accumulate in six months.

"The ground surrounding the site, even when daily scavenged, was saturated with excrement, which was sometimes so visible as to make approach difficult.

"The privy was generally so constructed and kept as to render decency, cleanliness, and comfort quite impossible.

"No greater nuisance exists in our miners' villages than the common midden-privy, which, by its position, size, and construction, and in its scavenging and daily use, pollutes the air, the soil, and surroundings of the dwelling.

"After careful consideration of all the circumstances we may, on general grounds, conclude that the prevalence of enteric fever in Blantyre was chiefly due to the methods of excrement disposal and local sanitary defects. Such a conclusion is fully borne out by the detailed notes of particular cases recorded during the investigation.

"Regarding the 9 cases which occurred at Low Blantyre, they may also be attributed to similar causes, although the interior of the houses there were perhaps worse than their surroundings. The type of disease was generally mild, and, from records of the hospital cases, many ran a short course. The removal of cases to hospital from unwholesome surroundings probably had a beneficial effect on the progress of the disease.

"*Special Preventive Measures.*—In addition to the usual removals and disinfection, the attention of the Sanitary Inspector was directed to the closet accommodation and local sanitary defects. The water-works were inspected and reported upon to the local committees, and the Sanitary Inspector was instructed to issue notices with a view to minimising the pollution of the Lees Burn. The introduction of an improved water supply, such as the Glengavel scheme will afford, and the formation of a special scavenging district, will meet the most pressing wants of this district; but a precise detailed house-to-house sanitary survey, followed up by remedial action, must also be aimed at."

To all the foregoing it might be added that under such insanitary conditions personal infectivity was an important factor in the spread of the disease.

In *Bothwell Parish*, which is the most extensive parish in the Middle Ward District, both in point of area and population, and

with a gravitation water supply from an upland source, introduced before 1890, enteric fever prevailed in various localities, the number of cases notified each year being 133, 77, 121, 95, and 87 respectively. The town of Bellshill and Mossend had naturally most cases, but New Stevenston, Tannochside, and Uddingston had a good number in the years 1892-1894. A milk outbreak occurred in Uddingston and Mount Vernon (the latter in Old Monkland Parish) in March, 1894, and this was specially reported upon at the time. The total cases amounted to 18. A family connected with a dairy had had a mild, unrecognised case, and the milk was infected in this way.

Cambuslang Parish had a gravitation water supply throughout the more populous areas, but the outlying villages were dependent upon local sources. In the year 1892 the village of Spittal was the scene of an outbreak, when 14 cases occurred in 13 families. The outbreak occurred in the month of November, the first case being reported on the 4th and the last on the 14th of that month. Lightburn Village was affected in the year 1895, when 23 cases occurred between 12th November and 20th December. This village comprised 69 dwellings, with 325 inhabitants. Many of the houses were old, of defective construction, and in a bad state of repair, and the midden-privy was the common form of sanitary convenience. The water supply was obtained from local sources, some of which were far from satisfactory. In all 11 houses were invaded. A gravitation water supply was introduced, and the other sanitary defects were dealt with by the Sanitary Inspector.

During September and October, 1895, 20 cases of enteric were notified from Newton Village. Here again some of the illnesses were attributed to the existence of insanitary conditions.

In *New Monkland* and *Old Monkland Parishes* the incidence of the disease was fairly extensive, the number of cases occurring each year in New Monkland being 64, 29, 58, 36, and 31, and in Old Monkland 36, 16, 71, 38, and 28 respectively. The cases were, however, fairly evenly distributed throughout the area.

The year 1893 saw a sharp outbreak in *Shotts Parish*, in the locality known as Dykehead, where 109 cases occurred in 69 families. The first case sickened on 1st January, 1893, and the last on 15th November. The hospital accommodation was, of course, quite inadequate to deal with all the cases, and, although a portable hospital was quickly erected, with accommodation for 12 patients, the vast majority of the cases had to be nursed at home. The water supply

was from a tank which collected water from a shallow well, and it came under grave suspicion; but, in the absence of any specific contamination, the water supply can be ruled out as the means of spreading the disease, although no doubt the inadequacy of the supply, even for cleansing purposes, must be taken into account. The drainage and scavenging arrangements were of the most primitive type, and it is only reasonable to assume that the disease was spread by personal infection, the inadequate water supply and the defective sanitary arrangements—including overcrowding—being contributory factors.

1896-1900.—During this period the population of the district averaged 165,000. The average annual number of cases was 347, being more than 100 cases less than the annual average for the previous quinquennial period. The improvement in the general sanitary condition of the district was to some extent reflected in the formation of Special Drainage and Scavenging Districts, 8 of the former and 4 of the latter having been created during this time, as follows:—*Drainage.*—Aitkenhead and Tannochside, Holytown, Stonehouse, East Kilbride, Busby, Cleland and Omoa, Dalziel and Netherton, Newton and Flemington. *Scavenging.*—Strathaven, Cambuslang, Uddingston, Bothwell, Bellshill, and Mossend.

Blantyre Parish.—The prevalence of enteric fever had greatly diminished during this period, the figures for the respective years being 27, 24, 56, 36, and 34.

Bothwell Parish.—The annual incidence of the disease from 1896 to 1900 was as follows:—94, 95, 78, 79, and 48. The most serious outbreak occurred in the year 1897, in the mining rows known as Parkhead and Orbiston, and also in some tenement property in other parts of the same locality; 49 cases occurred. The outbreak commenced towards the end of August among families residing in the neighbourhood of Crossgates, a locality which had hitherto furnished a number of enteric fever cases annually, and this year no fewer than 20 cases occurred in one week. Careful investigation of all probable sources of diffusing infection was made, and ice-cream was the only article which could be implicated, apart from direct personal infection. In one of the ice-cream premises in the locality occurred a case of illness resembling enteric fever. In Uddingston, in the year 1899, an outbreak affecting six persons occurred, under circum-

stances which pointed to the infection having been conveyed by an infant ten months' old. On July 4th the parents of this child were removed to hospital suffering from enteric fever, the infant being left in the care of an aunt. The child became ill about this date with what was supposed to have been summer diarrhœa, and recovered after a protracted illness of a somewhat indefinite nature. On August 14th the aunt sickened with enteric, and between then and the 29th August the remaining inmates (5 adults) sickened with the same disease.

Cambuslang Parish.—The incidence of the disease, from year to year, was as follows:—47, 10, 60, 69, and 33. During the years 1898 and 1899 the increased incidence fell chiefly in Flemington, Westburn Rows, and Newton Rows. These were outlying mining villages, where insanitary conditions prevailed. The drainage consisted of surface channels, which were very dilapidated and foul, and the privy-ashpits were offensive. The water supply was also objectionable.

Dalserf Parish.—The number of cases notified during each of the years of the quinquennial period was as follows:—19, 43, 161, 58, and 25. In the year 1897 a small outbreak, affecting three families, occurred in a small colliery village near Netherburn, and this possesses special interest from an etiological point of view. The water supply was unsatisfactory in two of the houses, although there was a gravitation supply in the third. The first case was attended by an experienced medical practitioner, who sickened with the disease about twelve days after the first case. There was no doubt as to the source of infection, but as it is rare for a medical practitioner to contract enteric fever from patients he is attending, the suspicion was for some time entertained that the disease was typhus and not enteric fever. This, however, was proved to be erroneous. All the patients were removed to Stonehouse Hospital, where the diagnosis was verified. Each patient made a good recovery.

The increased prevalence in the year 1898 was almost entirely due to a milk epidemic in Larkhall, which was responsible for more than 100 cases. The following special report has been extracted from the Annual Report for the year:—

“The population of Larkhall at the last Census was 8,261, and has during the last seven years increased considerably. The *sanitary circumstances* may be briefly referred to. The water supply is obtained from the Bothwell Water-works, owned by the Local Authority, and was introduced to Larkhall in 1881. A system of

sewerage was carried out in 1892-93, after the formation of a Special Drainage District, and is under the management of a local sub-committee. The dwellings are similar to those of other mining and industrial communities; the older and prevailing form consists of single-storey cottages of two apartments, divided by a lobby running straight from the front to the back of the dwelling. Each cottage generally has a considerable plot of ground attached, and a privy-ashpit. As the cottages abut upon one another, forming a continuous row, extending sometimes the length of a street, and have no roadway at the back of the premises, the only access for removing the ashpit refuse from the premises is by the passage through the dwelling. There are a considerable number of tenement houses, with the usual modicum of ground attached, and with privy-ashpits common to the use of several families. These conveniences are productive of nuisances. The miners' rows at Meadowhill are the only dwellings where systematic scavenging of the common privy-ashpits is carried out at the instance of the owners of dwellings. The water supply has not generally, in the older houses, been brought within the dwellings. The water-carriage system of excrement disposal has not been much adopted, and there is no system of refuse removal.

"The prevalence of *enteric fever in past years* is only known from the statistics collected in the department since 1891. These are set forth in the following table:—

CASES NOTIFIED AND DEATHS REGISTERED FROM ENTERIC FEVER
IN LARKHALL DURING THE SEVEN YEARS 1891-97.

			1891	1892	1893	1894	1895	1896	1897
Cases,	...	...	39	36	29	24	21	18	31
Deaths,	...	...	8	6	2	2	3	2	1

"It is pleasing to be able to show that there has been a marked reduction in the prevalence of enteric fever since 1891. During the first two years there were 14 deaths and 75 persons attacked; during the last two years there were only 3 deaths and 49 persons attacked; or, if we compare the mortality in the year 1891 with that in the year 1897, there were 8 deaths from enteric fever in the former year and only 1 death in the latter year. These figures emphasise the fact that enteric fever is a preventable disease, and also show that it prevails annually in this community.

"Coming now to the *current year*, we may trace the progress of the disease, and note the sanitary circumstances with which its occurrence is associated. The number of notifications received is given in the following table:—

NUMBER OF CASES NOTIFIED AND DEATHS REGISTERED FROM ENTERIC
FEVER IN LARKHALL DURING EACH MONTH OF THE CURRENT YEAR.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Cases,	—	—	—	—	4	3	2	4	3	93	9	9
Deaths,	—	—	—	—	—	—	—	—	—	8	3	3

“ There were no cases notified during the first four months of the year, and the number of notifications received each subsequent month up till October did not exceed that of the immediately preceding years; indeed, we had reason to hope that the total cases for the year 1898 would be under the average.

“ In May three cases occurred in a family residing in an insanitary dwelling at Millheugh; the other case occurred at Machan, and was probably infected from a previous unrecognised case. In June one case occurred at Margaret’s Place, in a wooden building scarcely fit for human habitation; two cases occurred in Raploch Street. In July one case was notified in Montgomery Street, but the patient resided in Paisley, and came home to Larkhall whenever she took ill; the other case occurred in Hill Street, and had been about three weeks ill before the notification was received. In August one case occurred at Graham’s Dyke, in a house where there was a foul nuisance at the rear of the dwelling; two cases occurred in Hill Street, where there had been a previous case ill for three weeks before being made known; the fourth case occurred in Miller Street. Of the four cases notified in September, one occurred in London Street, where there was a foul nuisance at the rear of the dwelling; one in Raploch Street, where there was a privy within six feet of the dwelling; one occurred in Church Street, and another in Muir Street, the diagnosis of which was not confirmed.

“ The circumstances mentioned in connection with these cases illustrate to some extent our experiences of enteric fever in non-epidemic outbreaks. It generally occurs, and tends to spread, where unwholesome conditions exist within and around the dwelling, and more particularly where excremental filth is allowed to pollute the soil and the atmosphere of human habitations. It is a feature of this disease that it often spreads by eluding recognition. Enteric fever may be characterised as a very treacherous disease, insidious in its onset, variable in its symptoms and severity. It simulates other diseases, and is very infectious when nursed under the circumstances which usually prevail in miners’ dwellings. After a person has been infected, from seven to fourteen days elapse before any symptoms develop. When these appear the patient may regard them in one case as a sick headache, in another as influenza or a bilious attack, or an attack of diarrhœa. Thus a case often escapes recognition for a considerable time, while the infection is being disseminated. For example, one of the cases in July was not recognised until after two other members of the family had been infected. Enteric fever, like other infectious diseases, may be imported from a distance, as was the case in Montgomery Street.

“ In the month of October the progress of the disease assumed a different form; the notifications for this month leap from 2, 3, and 4 in the previous months to 93. This change in the progress of the disease is shown in the following table, where cases are arranged according to the date of attack. We have now to deal with the disease in an *epidemic* form:—

NUMBER OF PERSONS ATTACKED WITH ENTERIC FEVER IN LARKHALL
WEEKLY, DURING THE LATTER PART OF THE YEAR 1898.

August.				September.				October.					Nov.	
6	13	20	27	3	10	17	24	1	8	15	22	29	5	12
1	1	2	—	1	—	1	15	26	38	12	4	1	3	4

“History of the Epidemic.”—The above table shows that the epidemic prevalence occurred in the week ending 24th September, and continued until the week ending 15th October. During these four weeks 91 persons were attacked. It was not until 4th October that an indication was obtained of an increased prevalence of enteric fever in Larkhall. On that date four notifications were received. Visits were then made by the Assistant Medical Officer and the Local Sanitary Inspector to the infected houses. In the course of the usual investigation as to probable causes of the outbreak, the source of the milk supply was, among other matters, carefully inquired into.

“On this account the dairy premises at 87 Union Street were visited. Here two of the inmates, the dairyman and one of his sons, were found in bed suffering from an illness said to be influenza. The information elicited was to the effect that the dairyman became unwell about 20th September, and was confined to bed from the 24th, so that the illness had lasted fourteen days; that the son had been confined to bed from about the 27th September, and about ten days before that had suffered from diarrhoea. His illness might, therefore, have commenced about the 17th September, or a few days earlier. Medical aid had not been summoned, and the dairyman’s wife had acted as nurse. From the history of the illness, and the appearance of the patients, there was reason to suspect that the illnesses were enteric fever. The dairyman was therefore requested (1) to stop the sale of milk from these premises; (2) to summon medical aid at once; and (3) to take the precautions necessary to obviate contamination of the milk vessels and the spread of infection to other members of the family. The local inspector was asked to call on the medical practitioners, and ascertain whether they had any patients with symptoms suspicious of enteric fever.

“On 6th October I visited the locality, and, with the medical attendant, saw the patients at the dairy. The dairyman was notified that evening as suffering from enteric fever, but the son was considered to have recovered from his illness. Subsequently I was able to satisfy myself that this son had suffered from an attack of enteric fever, by means of a bacteriological examination, known as Widal’s test, which I caused to be made. The wife of the dairyman also took ill, and was notified a few days later. Still later the servant girl sickened, and was notified at her own home in the rural part of the parish. The dairy business was now given up altogether, or, rather, transferred to the dairy farmer from whom the milk was supplied, and the dairyman removed to hospital next day. A list of milk customers was obtained, and visits made wherever cases were suspected by the Assistant Medical Officer and the Inspector. On 7th October I visited the dairy farm from whence the milk was supplied, and

found the inmates and dairy workers all in good health, and could obtain no evidence of anyone having suffered recently with symptoms of enteric fever. The Assistant Medical Officer visited Riccarton Farm, from which the dairyman had received a small quantity of milk—from two to three gallons daily. No illness among the dairy workers was found. A number of cases in Larkhall were now reported to the Inspector verbally, and 19 notification certificates were received. The daily progress of the epidemic is given in the following table:—

TABLE B4.

NUMBER OF PERSONS ATTACKED IN LARKHALL WITH ENTERIC FEVER, AND THE NUMBER OF NOTIFICATIONS RECEIVED DAILY DURING THE EPIDEMIC IN OCTOBER, 1898.

Date.	Number of Persons attacked.	Number of Notifications received.	Date.	Number of Persons attacked.	Number of Notifications received.
Sept. 20	1	—	Oct. 12	4	9
„ 21	3	—	„ 13	2	7
„ 22	3	—	„ 14	3	2
„ 23	6	—	„ 15	—	2
„ 24	1	—	„ 16	2	—
„ 25	5	—	„ 17	1	1
„ 26	2	—	„ 18	—	8
„ 27	5	—	„ 19	—	—
„ 28	3	—	„ 20	—	1
„ 29	3	—	„ 21	—	—
„ 30	6	—	„ 22	—	2
Oct. 1	2	—	„ 23	—	—
„ 2	11	—	„ 24	—	2
„ 3	5	—	„ 25	—	4
„ 4	3	4	„ 26	—	2
„ 5	6	—	„ 27	—	—
„ 6	5	2	„ 28	—	1
„ 7	5	20	„ 29	—	1
„ 8	3	4	„ 30	—	—
„ 9	—	—	„ 31	—	—
„ 10	—	11			
„ 11	3	10	Total	93	93

“Among the other preventive measures adopted, hospital isolation was offered and urged in every case which the medical attendant considered fit to be removed. Motherwell and Stonehouse Hospitals, which usually serve this locality, were first taken advantage of, but, in order not to deprive other parts of the district served by these hospitals of any accommodation they might require, the emergency hospital at Dalserf, which is conveniently situated to Larkhall, was equipped, staffed, and opened on the 13th October. Where cases were treated at home, measures were adopted by the Sanitary Inspector

to disinfect the discharges, and a man was engaged temporarily for this purpose.

“The clinical features of the disease do not call for special comment. Many of the cases removed to hospital were of a severe type, but, as only 10 deaths have occurred among 92 cases, the fatality at present is not above the average. In one or two instances where the patients’ relatives refused to sanction removal to hospital, they, after a time, when the patient became delirious and unmanageable at home, urged removal.

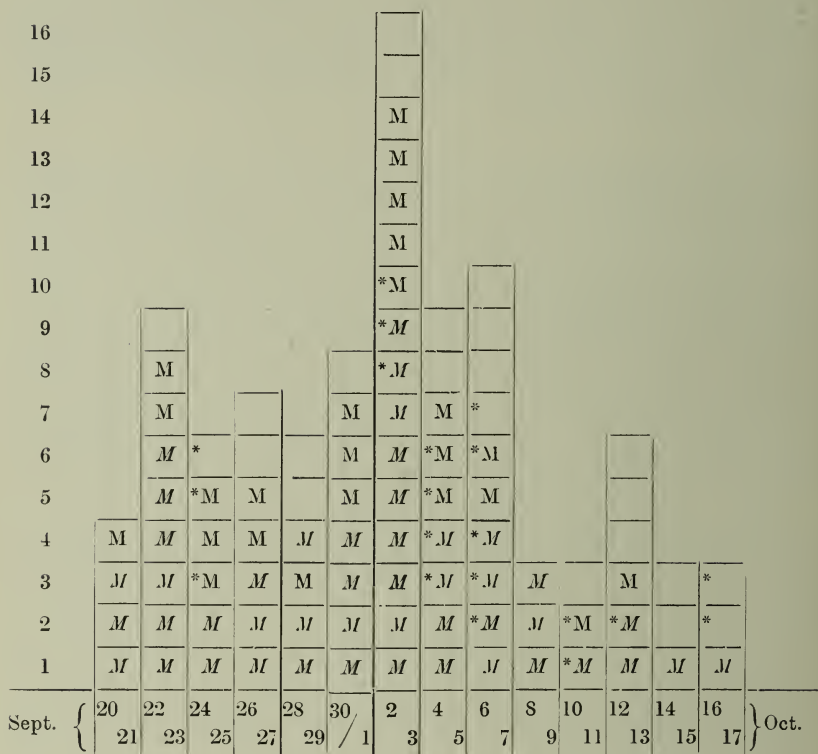
“*Cause of the Epidemic.*—The outbreaks of enteric fever which have occurred at Larkhall up till October have all been more or less successfully confined to the houses in which they originated; but, being an infectious disease, its liability to spread depends upon the facilities which exist for disseminating infection. When the seeds of the disease find an entrance to a water, milk, or food supply distributed to the public, the dissemination of the disease may be co-extensive with the distribution of the infected supply. Under the guise of a refreshing draught, nutritious food, or a succulent morsel, this disease can forsake its usual haunts, and produce disasters which overshadow all its sporadic efforts. To produce the epidemic we are considering, some unusual means of dissemination must have operated, and as we already have a clue in a milk supply, we may discuss it first.

“The sources of milk supply are somewhat numerous in Larkhall, there being 34 registered dairymen and purveyors of milk known to retail milk there. It is common to find a household supplied with milk from two or more sources. The milk is distributed from milk-houses, shops, carts, and messengers. In some dairy businesses there is not only an intimate relation between the milk-house and the dwelling, but also an association of dairy work and domestic duties not commendable. Such was the case at the dwelling of the dairyman where enteric fever existed. The first case of enteric fever which occurred in this house was the son, who apparently suffered from a mild type of the disease, which did not confine him to bed. His attack probably commenced before the 17th September, and the father’s attack on 20th September. The epidemic began about the 22nd September. The first illnesses at the dairy preceded the epidemic, and it was possible for the milk to be contaminated, and in point of time cause the epidemic. But what evidence have we that the milk actually was contaminated?

“The disease occurred in 66 different houses, many of which were situated widely apart, and in these houses 93 persons were attacked within a period of four weeks. In 46 of the houses, where 70 cases occurred, the families obtained the whole or part of their milk from the suspected supply. In only 20 houses, with 23 cases, did the families get no milk from this source. Having regard to the large number of different milk supplies available, these figures show that the incidence of the disease fell most heavily upon those families who obtained milk from the suspected supply. See the following diagram:—

TABLE B5.—CASES OF ENTERIC FEVER.

Each Case is represented by a Square.



The above diagram shows the number of persons attacked with enteric fever in Larkhall during the epidemic. Each column represents the cases occurring in two days. The letter "M" indicates that the person attacked obtained milk from the suspected supply only, and the letter "M" that some milk was obtained from the suspected supply, while the blank space indicates that no milk was obtained from the suspected supply. The * indicates a secondary or other case, which might possibly be excluded when considering the immediate cause of the epidemic.

“As I have been unable to discover any circumstances which could explain this incidence of the disease, apart from the milk supply, this might be accepted as evidence that the milk supply was contaminated. But when we consider the extent and distribution of the milk supply, this evidence is found to be insufficient. From the list of customers prepared by the dairyman, I find he supplied 120 families residing in Larkhall, and 55 families outwith Larkhall.

These 55 families resided at miners' rows, where, so far as can be discovered, no cases of enteric fever have occurred. If the milk were contaminated, the distribution of the disease should bear a closer relation to the distribution of the milk. To elucidate this, it is necessary to consider the details of the dairy business, and more particularly the primary sources of the milk supply and the means of distribution.

“The dairyman (Duncan Macpherson) obtained his milk chiefly from Low Merryton Farm, and only some three gallons from Riccarton Farm. He went with his milk cart—usually accompanied by his son (who contracted enteric fever)—through the principal streets in Larkhall, and also the outlying miners' rows above referred to, retailing the milk to his customers. His daughter retailed milk from a shop in Wellgate Street, and his wife retailed milk from the dwelling in Union Street, where there was a small milk store and a boiler-house for cleansing all the milk^a barrels and vessels. The milk cart was loaded at Low Merryton Farm, and on entering Larkhall the distribution commenced, a quantity being left at the shop and at the house for sale there. After the customers were served in Larkhall, the cart returned to the house, and the dairyman breakfasted. Thereafter he served the customers in the outlying places, lifting on the way the small quantity of milk obtained from Riccarton Farm. The whole family resided at the house in Union Street.

“If we now reflect on all these facts regarding the source and distribution of the milk, and the circumstances and surroundings under which the illnesses were nursed at the dwellings, it will at once be conceded that the milk supply, as served to the public, was not all equally liable to have been contaminated. Consider next the local incidence of the disease. The following table shows the distribution in Larkhall, and at the same time its relation to the milk supply:—

TABLE B6.

LOCAL INCIDENCE OF ENTERIC FEVER IN LARKHALL DURING THE EPIDEMIC, 1898. DISTRIBUTION OF THE CASES ACCORDING TO STREETS, DISTINGUISHING BETWEEN THOSE WHO OBTAINED MILK FROM THE SUSPECTED SUPPLY (MACPHERSON'S), AND THOSE WHO OBTAINED MILK EXCLUSIVELY FROM OTHER SOURCES.

Street.	The Number of HOUSEHOLDS invaded who obtained Milk.		The Number of PERSONS attacked in Households who obtained Milk.	
	From Macpherson.	From Other Sources.	From Macpherson.	From Other Sources.
London Street, ...	12 ^a	—	19	—
Union „ ...	14	3	24	3
Marshall „ ...	1	—	1	1
Hill „ ...	1	3	1	3
Montgomery Street,	3	1	5	1
Machan View, ...	—	1	—	1
John Street, ...	3	—	3	—
Church „ ..	—	2	—	2
M'Neil „ ...	2	4	3	5
Raploch „ ...	2	2	2	2
North „ ...	1	—	1	—
Wellgate Street, ...	—	1	—	1
Hamilton „ ...	1	1	3	1
Drygate „ ...	2	—	3	—
Low Miller „ ...	1	—	1	—
Muir „ ...	—	2	—	4
Miller „ ...	1	—	2	—
High Pleasance, ...	1	—	1	—
Cherryhill View, ...	1	—	1	—
	46	20	70	23
	66		93	

“ We observe that the incidence of the disease was greatest in London and Union Streets, yet the population of these streets is not greater than the population of some others. Comparing the incidence in the two streets named with that of all the other streets named. we find 43 persons were attacked in London and Union Streets and 49 in the other seventeen streets.

"The above table also shows that in London and Union Streets all the cases, except three, occurred in families which obtained milk from Macpherson, while in the other streets the proportion of cases among Macpherson's customers to others was 26 to 23. There is evidently an important relation between the distribution of the disease and the suspected milk supply. Where the disease was most prevalent the families affected were mostly supplied with Macpherson's milk. Even where the disease was less prevalent, more than one-half of the families affected received Macpherson's milk.

"From the list of customers prepared by the dairyman, we learn that in London and Union Streets he delivered milk to 18 families. Of these families, 14 have had cases of enteric fever. But a considerable quantity of milk was sold to customers calling at the house in Union Street and at the shop, which was the nearest milk shop for families residing in London Street. Among families thus calling for milk, and resident in London and Union Streets, 11 have had cases of enteric fever.

"Note how few of the recognised family customers in Union and London Streets escaped being infected, and how many, owing to the proximity of the milk-house and shop, went there for their milk supply. The milk supplied from these two places of distribution seems to have had a greater infective power than that supplied from the milk-cart. No milk was sold in that part of Larkhall known as Meadowhill, and no cases of enteric fever occurred there.

"We have shown that the distribution of the disease throughout Larkhall coincided with the distribution of the milk, and that the incidence varied according to the source of milk distribution, being heavier on those customers most conveniently situated to the milk-house and shop.

"We have now to consider the absence of enteric fever among milk customers outside Larkhall. As the dairyman and his wife are still in hospital, we have not been able to ascertain what manipulations took place in disposing of the milk. We know that some fresh milk was taken on the cart before serving the outside localities. We have shown reasons for believing that the milk as sold from the cart, even in Larkhall, did not possess so great infective properties as that distributed from the house. It is therefore possible to explain how the milk as sold outside could possess little or no infective properties, and, although we have not yet been able to ascertain how that was brought about, this does not invalidate any conclusion based upon positive evidence regarding the milk sold in Larkhall. The ways and means of infection are often difficult to trace when we are dependent upon the public for information.

"The stoppage of the milk supply, and its influence on the progress of the disease, may be studied on the diagram. On 4th October the sale of milk from the milk-house was stopped when the Assistant Medical Officer discovered the illness there. On the 6th the whole trade was stopped. Twelve days from this date (the more usual period required to incubate the disease) all evidence of milk infection vanishes and the epidemic ceases.

“Some cases of enteric fever have occurred at or near Lew Merryton Farm, which is in the Parish of Hamilton, and was the primary source of milk supply to Macpherson’s customers. On the 24th September a ploughman’s child was attacked. She, with other children in the family, went to school in Larkhall, but was the only one of the family who went to Macpherson’s shop for her lunch, and she partook of milk there. This case may therefore be considered as forming part of the Larkhall epidemic. A ploughman and the farmer’s son were attacked on the 9th and 17th October respectively. A case also occurred at Bog Row on 1st October—a miner. The source of infection in these three cases has not been satisfactorily cleared up yet, but Macpherson’s cart continued coming to this farm for milk up to 6th October, and sometimes unsold milk was returned to the farm. The infection in these cases was probably imported from Larkhall.

“The relation of the epidemic to water supply, nuisances, and drainage has been inquired into, and, after careful consideration of all the information obtained, I am unable to find anything therein which could explain the progress and distribution of the disease during the epidemic. In the miners’ rows at Meadowhill, which has been considered the least sanitary portion of Larkhall, not a single case of enteric fever has occurred. No doubt the sanitary circumstances of this town are capable of improvement, and I would take this opportunity of recommending the formation of a scavenging district, with the introduction of a daily system of refuse removal. The substitution of water-closets and movable ashbins for privy ashpits would lead to improved sanitary surroundings.

“The *conclusion* is forced upon us that the milk supplied by Macpherson is responsible for the epidemic. Apart from the evidence of actual spread of the disease, it is a matter of grave importance that at this dairy there existed enteric fever under circumstances fraught with serious consequences to the community receiving the milk supply. As this is not the first occasion during the present year that such has occurred, it is necessary to call the attention of persons carrying on dairy businesses to their legal responsibilities, and more particularly to Article 9 of the Dairies, Cowsheds, and Milkshops Order, 1885, which is as follows:—

“ ‘It shall not be lawful for any person following the trade of cowkeeper, or dairyman, or purveyor of milk, or being the occupier of a milk store or milk shop—

“ ‘(a) to allow any person suffering from a dangerous infectious disorder, or having recently been in contact with a person so suffering, to milk cows or to handle vessels used for containing milk for sale, or in any way to take part or assist in the conduct of the trade or business of the cowkeeper or dairyman, purveyor of milk, or occupier of a milk store or milk shop, so far as regards the production, distribution, or storage of milk; or

“ ‘(b) if himself so suffering, or having recently been in contact as aforesaid, to milk cows, or handle vessels used for containing milk for sale, or in any way to take part in the

conduct of his trade or business, as far as regards the production, distribution, or storage of milk,

until in each case all danger therefrom of the communication of infection to the milk or of its contamination has ceased.'

"A penalty of £5 for an offence against this Order is provided by the amending Order of 1887.

"That an offence against this Order has been committed by the dairyman in question will probably be admitted, but the plea is advanced that it was done in ignorance. This is a plea the Order does not recognise, and there is no evidence to show that the offender took reasonable precautions to guard against committing the offence.

"Whether a prosecution should be instituted in this case is a matter for the consideration of the Second Divisional Committee.

"(By instruction of the committee, a prosecution was instituted against the dairyman, and a conviction obtained.)"

Hamilton Parish.—The number of cases occurring each year was as follows:—49, 38, 13, 19, and 5. In 1896 epidemic prevalence occurred at the mining villages of Quarter and Eddlewood. In both these places the midden-privy system of refuse disposal was in use, and water supply was obtained from well hydrants placed alongside the road. There was considerable delay in recognising the disease, and it attained a prevalence on this account which might have been avoided. In all 42 cases were recorded. During the following year—viz., 1897—the disease was again prevalent in these villages, when 36 cases occurred. The prevalence was associated with sanitary defects, and in some instances the disease spread to other members of the family, through inability to get the first cases removed to hospital, although by this time there was ample hospital accommodation available. (It is significant that only 54 per cent. of the total cases of enteric fever were removed to hospital.)

New Monkland Parish.—The incidence of cases from year to year was as follows:—33, 15, 10, 10, and 9. In the year 1896 a localised outbreak occurred in a cottage at Stand. There was delay in recognising the true nature of the illness, the first case having been ill for a month before enteric fever was diagnosed, by which time two secondary cases had occurred. Subsequently all the family except the father (in all nine persons) were attacked. These patients were admitted to the new hospital at Uppertown, Longriggend.

Old Monkland Parish.—The incidence of cases from year to year was as follows:—24, 13, 22, 62, and 30. The heaviest incidence occurred during the year 1899, when 62 cases were notified. 20 of these cases occurred in the village of Calderbank. A young medical practitioner here contracted the disease in the course of

his visitation of infected households, and returned to his home in Ayrshire, where he died. The main factor in the spread of the disease was the delay in recognition of the true nature of the initial illnesses.

Shotts Parish.—The total number of cases recorded during the five years, 1896 - 1900, was 91, which is a vast improvement on the 295 cases notified during the previous quinquennial period. The incidence of the disease was evenly distributed throughout the parish.

Stonehouse Parish.—Only 8 cases were notified during the five years, 5 of them occurring in 1898. Three of these cases were undoubtedly due to the refusal to have a primary case removed to hospital. Towards the end of the year a case occurred at a farm, in the person of the farmer's son. The parents refused to permit removal to hospital, and engaged a nurse. The patient duly recovered, but early in January, 1889, a servant maid sickened with the disease. She was at first thought to be suffering from influenza, and was allowed to go home, where she was ill for about twelve weeks. At the same time a male servant took ill, and he infected a third person, who went to his home in Ayrshire.

1901-1905.—During this period the population averaged about 189,000. The average annual number of enteric fever cases was 295, being more than 50 cases less than the annual average for the previous five years. One additional Special Drainage District was formed to embrace the locality of Carfin and Cleekhimin, and one Special Scavenging District at Dalziel and Netherton.

Blantyre Parish.—At Dixon's Rows the disease appeared in the month of June, 1901, and gained an epidemic prevalence in the months of August, September, and October. The outbreak was very carefully investigated by the Assistant Medical Officer of Health, spot maps were prepared, and a full account is given on pages 99-104 of the Annual Report. The following is an excerpt from that report:—

“The *sanitary circumstances* of Dixon's Rows are defective. The drainage consists of open channels alongside the footpaths in front of the houses. These channels lead to a catchpit at the end of each row, and this is regularly cleaned out. Household refuse is deposited in large ashpits at the backs of the houses between the rows, and to these privies are attached. It is at once seen how rudimentary are these means of drainage, and of disposal of excrement and refuse. It is found that household refuse is deposited in the place most convenient to leave it, that slop waters are often thrown on the footpath,

instead of into the surface channel, and that the privies are constantly abused. Now, while it cannot be said that such defects were the cause of the outbreak, it has been my experience that outbreaks such as this are associated with these defects. It may, therefore, be taken that these circumstances predisposed the population, and afforded facilities for the spread of enteric fever.

“The *condition of the houses and occupants* varies greatly. Many of the houses show unmistakable signs of poverty and squalor; indeed, the majority are much below the average found in miners' rows. Domestic hygiene is for the most part neglected, only half of the houses are in a state at all cleanly, and the advantages of light and ventilation are not understood. Personal cleanliness is, I fear, neglected by most of the older inhabitants, and in the case of the younger children is sometimes attended to at long intervals by the mother. The houses are crowded. Of the 1,405 persons in the rows, 833 were over 12 years and 572 under 12. This gives an average of 3 adults and 2 children for each house, or 2 adults and 1·5 children for every occupied room. A great deal of visiting by neighbours goes on, especially in houses where illness exists. Impelled sometimes by kindness, but frequently by curiosity, the housewives gather in the houses of the sick. Neighbours sometimes take the children when illness occurs, a lodger has to find other lodgings, and perhaps some neighbour attends to the nursing.

“From all this it was clear that *direct conveyance of the contagion* played an important part in the spread of the disease. For several years I have reported enteric fever as a highly infectious disease, capable of spreading from one person to another in a family, and from one family to another in certain circumstances. It may be that in hospital the skilled nursing of known cases of the disease, with every modern facility, only rarely gives rise to this disease among the attendants, but the conditions are totally different in houses such as are found in Dixon's Rows. Neither skill nor intelligence is exhibited by the nurses there; the case is frequently an ill-defined one, and is not diagnosed for days or weeks; while there are no facilities whatever for the rapid disposal of the infectious discharges of the sick. Recent researches have shown how infectious one of these discharges (the urine) may be. Small wonder is it, then, that the sick patient speedily becomes a centre for the spread of infection around, and this before he is known to be suffering from enteric fever at all.

“Many of the cases occurring in Dixon's Rows last year were very ill-defined, and the prevalence of ordinary summer diarrhœa increased very considerably the difficulty of diagnosis. Some cases, indeed, of this summer diarrhœa may have been of a true enteric nature. A house-to-house visitation of the rows in September revealed 16 cases of prolonged diarrhœa, and 11 cases of influenza of long duration; further, during July and August 9 deaths were registered as having occurred from gastro-enteritis, so that altogether 36 cases of illness simulating enteric fever were discovered. Diagnosis of enteric fever is at all times difficult, but it is especially so among the poor and dirty, and where correct and frequent observations cannot be made.

"In some instances a diagnosis was arrived at after a Widal test, but it is hoped that the facilities for having this done, consequent on the completion of the equipment of the bacteriological laboratory, will be fully taken advantage of by medical practitioners.

"Abundant evidence of the spread of the disease directly from the sick to the healthy was seen in this outbreak. As is seen from the table, 74 cases occurred in 51 families, and the second cases in the family almost always sickened at such a time after the first, and under such conditions that they were regarded as infected by the first. The following table shows the period elapsing between the dates of sickening in the first and subsequent cases in the same family:—

Weekly Period that elapsed.	Under 1 week.	-2	-3	-4	-5	-6	Over 6 weeks.	Total.
Subsequent Cases occurring,	2	2	2	6	2	3	6	23

"But secondary cases in the same house do not exhaust all the cases of personal conveyance of the contagion. In several instances neighbours, relations, and others living in the rows, who were known to have visited the infected houses, were found afterwards to have sickened with the disease. From this cause arose a localisation of enteric fever in the rows itself, and this can be seen in the larger spot map, a good example being noted on the south side of Hall Street, near the centre, where one of the first cases was notified.

"The *composition of the population* is remarkable, on account of the large number of newcomers to the rows. It was found in September that in 102 of the houses the tenants had come within the preceding year. Enteric fever broke out in 33 of these 102 houses, whereas only 18 of the other 173 houses, which the tenants had occupied for more than a year, were affected. We have thus got a morbidity rate of 90 per thousand among newcomers, while the morbidity rate among the older residents was only 29 per thousand; that is, the newcomers were three times more liable to be attacked.

"The following table shows the age and sex distribution of the cases:—

Age	-5 years	-10	-15	-20	-25	-30	-35	-40	-45	-50	50+	Total.
Male,	10	6	6	5	5	7	1	—	—	1	—	41
Female,	5	14	5	1	2	2	1	—	3	—	—	33
Total,	15	20	11	6	7	9	2	—	3	1	—	74

"The *sickness or morbidity rate* was 52 per thousand. As 43 of those attacked were under 12 years of age and 31 over 12 years, the morbidity rate under 12 was 75 per thousand, and over 12, 37 per thousand; that is, the liability to attack was twice as great among those under 12 as amongst those over 12 years.

"The *fatality rate* among the cases was 5.4 per cent.—a very small rate. This is to some extent accounted for by the large proportion of younger patients that were affected, but, generally, it can be said that the cases were by no means severe.

“ The *administrative measures* adopted were the prompt isolation of each case as it was notified, followed by disinfection of the premises, bedding, &c.; the rows were kept under observation for mild forms of the disease and for secondary cases sickening. Altogether, 72 of the 74 cases were isolated in hospital. A house-to-house visitation was made of the rows, and the necessity of medical attendance was urged in all cases of lesser ailments. Special attention was paid to the sanitary arrangements of the houses; the open channels were flushed and disinfected, the catchpits at the end of the rows cleaned out, and the ashpits and privies emptied and disinfected.”

The decreased prevalence of enteric fever in the year 1902 was most marked, there being only 18 cases registered in the whole of Blantyre Parish, 5 of these being in Dixon's Rows. In the year 1903, 73 cases were notified, the increased incidence being accounted for by outbreaks at Baird's Rows and Dixon's Rows. At the former 19 cases occurred in 11 families, and at the latter 30 cases in 23 families. In the year 1904, 49 cases occurred, including 9 at Dixon's Rows. In 1905, 69 cases, including 38 in Stonefield and 9 in Dixon's Rows, occurred.

Bothwell Parish.—The number of cases notified each year during this period was as follows:—149, 75, 66, 25, and 87. In the year 1901 the heaviest incidence fell in the Uddingston area, where a severe outbreak, due to infected milk, occurred; 49 cases sickened in December, and 34 in January of the following year. The outbreak began when four cases were notified on 19th December, the first cases including a cowkeeper and his wife, carrying on a considerable dairy business. The dairy was at once visited by a member of the medical staff, who discovered a state of affairs which left little room to doubt that the milk had been exposed to infection, and probably had been in an infective condition for about three weeks. The dairyman was removed to hospital at once, his wife and child the following day, and the milk distribution ceased. The various medical practitioners in the town were privately advised to be on the look-out for cases, and of the desirability of every means being employed that would assist in an early recognition of the disease.

The source of infection here had to be carefully investigated, since the other two cases were found to have had their milk supply from this dairy, and no other cases were known in the locality. On making inquiry as to the health of the other inmates of the dairy, the dairyman's wife informed the Assistant Medical Officer of Health that her child had been unwell some time ago, and had received medical attendance. Further, it was ascertained that in the family of the servant girl, whose home is only a short distance away, a series

of illnesses had occurred, and were attended by another medical practitioner. These illnesses, as far as permissible, were inquired into, and, as they had been the subject of much public comment, it was thought desirable to submit the facts as ascertained.

“Enteric or typhoid fever is always difficult to recognise in young children, and infants very seldom suffer from it. In adults this fever is sometimes difficult to recognise, because it varies so much in the symptoms, duration, and course of illness. Very seldom does a medical practitioner notify a case until he has had it under daily observation for seven days; very seldom is medical aid sought until the patient has been ill for seven days, and sometimes the illness runs its course without medical aid. In recent years bacteriology has furnished us with a valuable aid to diagnosis in what is usually known as ‘Widal’s blood serum test,’ and this we offer to do free of expense for every medical practitioner. It is desirable that in all doubtful cases advantage should be taken of this valuable aid to diagnosis, and thereby tend to obviate the serious dangers arising from unrecognised cases.

“Regarding the illness in the dairyman’s family, I received the following information from the medical attendant:—

“In the last week of November he was called in to see the child, aged 14 months, which seemed to be suffering from teething, with gastric disturbance. The illness lasted only about fourteen days, and the clinical symptoms were not such as to warrant a diagnosis of enteric fever, especially as there was no known case of this disease in the locality. About the second week of December he found both parents complaining, more particularly the husband, who began to show symptoms of enteric fever about the 16th or 17th December.

“Both cases were notified to me on the 19th December, and the diagnosis in the woman’s case was confirmed by a Widal’s test on the following day, when she was removed to hospital, along with the child, who also gave the positive reaction found in enteric fever cases. In the light of subsequent events the medical practitioner believes it is probable that the child had an abortive attack of enteric fever, although the clinical symptoms did not warrant such a diagnosis.

“The illnesses in the servant girl’s family were brought under my notice by the medical attendant, who explained that the first to sicken was the mother (Mrs. T. or K.), who took ill about the beginning of October, and suffered from a febrile illness, which might have been continued fever of a typhoid type. The next illness in this family was a child, who sickened about the end of October, and subsequently another child, and ultimately the father, suffered from an illness of the same nature. A diagnosis of enteric fever in the first case was confirmed by a Widal’s test, and in the light of subsequent events there is reason to believe that all these illnesses were an indefinite form of enteric fever. The public will, no doubt, consider a grave responsibility rests with a medical attendant who fails to notify such a series of illnesses occurring in one family, but the Act

only requires notification when the medical practitioner *becomes aware* that the patient is suffering from an infectious disorder to which the Act applies.

"As there was considerable intercourse between these two families, and as it was customary for the servant girl, with the dairyman's child, to visit her mother's home, where the first illness occurred, it is easy to see how infection could be introduced to the dairy. The dairyman's wife all through her child's illness, even up till the day before her removal to hospital, attended to the dairy, milking the cows and preparing the milk for distribution, which was carried out by four girls, including her own servant. The milk could be thus infected, and the disease disseminated.

"In considering the distribution of the disease in point of time, it will be remembered that enteric fever takes about fourteen days to develop; that is to say, after a person has been infected, a period of fourteen days elapses before any symptoms appear. If we now classify the cases according to the date of sickening or onset of illness, and include, not only those cases which were notified, but also those which were subsequently considered to have been enteric fever, we will be able to understand the relation of the earlier cases to the epidemic prevalence, or serious outbreak of the disease.

CASES NOTIFIED AND DISCOVERED, WITH THE FAMILIES AFFECTED, SINCE OCTOBER, 1901, CLASSIFIED IN WEEKLY PERIODS ACCORDING TO THE DATE OF SICKENING.

Week ending,	October					November				December				January			
	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25
Cases,	1	—	—	1	1	1	—	2	—	2	12	29	25	12	3	1	—
Families,	1	—	—	—	—	1	—	—	—	—	12	14	17	9	1	—	—

"We observe that the epidemic prevalence extends over a period of four weeks, beginning in the week ending 14th December, attaining its maximum height in the two following weeks, ending 21st and 28th December, and disappearing in the week ending 4th January. We have already shown how the infection of enteric fever may have been introduced to the dairy, and how it may have existed there in an unrecognised form about the end of November. Keeping in view the period of fourteen days required to develop the disease, we find the commencement of the epidemic coincides with the development of infection in the dairy, and terminates with the removal, on the 20th December, of the infective persons to hospital."

It was thought desirable to issue in pamphlet form some instructions on the subject of enteric fever, and the pamphlet is here incorporated:—

"**TYPHOID FEVER.** — This disease, sometimes called enteric or gastric fever, is very infectious. It may spread either directly from the sick to the healthy, or indirectly by means of water, milk, or food which has been exposed to infection. All the discharges from the

sick person are to be regarded as infectious, but the urine especially so. During the course of the illness, the 'water' passed by a patient in one day frequently contains an enormous number of germs of the disease, sufficient to infect a whole family or a community, depending upon the facilities given for the transmission of the germs to others. The infective condition generally lasts for about six weeks, but some patients are infective for an even longer period.

“Precautions.—Isolation of the sick person should be efficiently carried out, preferably in an isolation hospital. Where a patient is isolated at home, the infectious nature of the disease should always be borne in mind. All discharges from the patient and all utensils used for receiving same should be thoroughly disinfected. Chloride of lime or formalin is recommended for this purpose, and can be obtained at the Public Health Offices. The disinfectant must be used in sufficient strength and amount, and for a sufficient time, to be effective. Perfect cleanliness in the sick room, with plenty of fresh air, is extremely important in preventing the spread of the disease. The person nursing or in attendance on the patient should carefully dispose of all discharges after disinfection, and should then thoroughly wash and disinfect her hands. The nurse or attendant must always thoroughly wash and disinfect her hands immediately before partaking of any food.

“In using formalin, the strength should be 5 per cent. (1 part of formalin, as sold, and 19 parts of water). The amount should be sufficient to soak thoroughly any article of clothing, or in the case of a discharge at least equal to the volume of the discharge itself, and the time allowed for the disinfectant to act must be at least half-an-hour.”

Of the remaining cases in Bothwell Parish during the year, 19 were at Bothwellpark and Muirpark Rows, 15 at Hamilton Palace Colliery Village, 11 in Bellshill, and the others fairly evenly distributed over the parish.

In the year 1902 the incidence of enteric fever had fallen 50 per cent., and 39 of the 75 notified cases occurred in Uddingston, in connection with the milk infection previously dealt with. In the year 1903, 66 cases were notified, 37 of which were in connection with an outbreak at Nimmo's Rows, New Stevenston. The houses had been built shortly before the outbreak occurred, and the disease was spread from the sick to the healthy. The first case notified was found to have been suffering for seven weeks, and by the time the true nature of the illness was recognised four other cases in the same family and four persons in adjoining houses had sickened. The subsequent cases almost all occurred among those who had been associated with the earlier cases. The number of persons attacked in each infected house was high (21 families, 37 cases), and increased in proportion to the delay in recognising the disease in the primary case. Thus, in one house where the nature of the illness was not

recognised until the patient recovered, five others sickened, and in other two houses, where the patients were ill for more than six weeks, four further cases occurred.

In the year 1904, only 25 cases occurred in the whole parish, the incidence being evenly distributed over the area. In 1905, 87 cases occurred, affecting 65 families, including 16 cases in Bothwellpark Rows. The outbreak here was discovered by a note being received of a case of enteric fever occurring outwith the district. This person resided with a friend, M., at Bothwellpark, from the 18th to the 25th August. A visit was made to the rows by the Assistant Medical Officer of Health on 12th September, and it transpired that between these dates a child of M.'s was ill, and died on the latter date, the cause of death being certified as acute gastric catarrh and meningitis. The mother, M., did not seem well at date of visit, and a specimen of blood was taken to ascertain if Widal's reaction could be obtained, as the clinical condition of the mother was very suggestive of enteric fever. The blood gave a good positive reaction, and the patient was removed to hospital the same day. Further inquiry elicited the information that the mother and child had been in Glasgow, and that M. had nursed her own mother, F., who died on 8th July, the death being certified as mucous colitis, but subsequent developments left little doubt it was enteric fever. It will thus be seen that both grandmother and her grandchild suffered from and died of unrecognised enteric fever, and the mother of the child was actually suffering from enteric fever for nine days before the true nature of her illness was discovered.

Cambuslang Parish.—The number of cases notified each year was as follows:—35, 57, 30, 36, and 28. The majority of the cases notified in 1901 occurred in the outlying villages of Flemington and Newton. In 1902, 19 of the cases occurred in Hallside Village, many of them being of a mild and indefinite character, which caused considerable delay in their recognition; indeed, the first case notified was only recognised after recovery. Of the 16 cases occurring in Cambuslang town in 1904, no fewer than 10 were secondary, and traceable to direct personal infection in the same house, while other 3 cases occurred among friends and neighbours visiting the patients before removal to hospital. In the year 1905, seven cases occurred in one family in Cambuslang. The mother of this family, A., had been attending a patient in the same building, whose illness did not at first give rise to a suspicion of enteric fever. During the visits a child of A. became infected, and she in turn infected six others in her own household.

Dalserf Parish.—The number of cases notified each year was as follows:—35, 11, 18, 10, and 124. In 1901 the town of Larkhall had 21 cases, and the evidence obtained strongly suggested an infected milk supply. In the year 1905 Larkhall and neighbourhood was visited by another milk outbreak. This was very carefully investigated at the time, and the results of investigation recorded in the Annual Report, from which the following has been extracted:—

“During the current year enteric fever was almost entirely absent from Larkhall and neighbourhood until the present epidemic. In the month of June one case (a child of three) occurred at Meadowhill Rows. After fully a fortnight’s illness the patient was notified, and removed to hospital. About the 12th August a lad of 18 years sickened at Hareleeshill Road, was notified on the 24th August, and removed to hospital. No other cases were brought under our notice until the 26th September, when the notifications increased daily, so that by the 14th October 90 cases were reported. The following table gives the statistics for the whole year:—

NUMBER OF CASES NOTIFIED AND DEATHS REGISTERED FROM TYPHOID FEVER IN LARKHALL AND NEIGHBOURHOOD DURING EACH MONTH OF THE YEAR 1905.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Cases,	—	—	—	—	—	1	—	1	14	93	10	5
Deaths,	—	—	—	—	—	—	—	—	—	2	4	—

“Proceeding to consider the causes of this epidemic and the preventive measures adopted, it will be remembered (1) that typhoid fever has a long incubation period—frequently 12 to 14 days; (2) that, as the symptoms are extremely variable and often indefinite, the disease is difficult to diagnose before the eighth day of illness, and sometimes is so mild that medical aid is not summoned; and (3) that, while the disease is commonly transmitted from the sick to the healthy, as in other infectious diseases, it only occurs in widespread epidemics when the infective germs find entrance to a public water, milk, or other food supply.

“CAUSE OF THE EPIDEMIC AND THE PREVENTIVE MEASURES ADOPTED.

“If we now classify the cases according to date of onset of illness (this can only be done approximately), we can study the progress of the epidemic or distribution as regards *time*.

NUMBER OF PERSONS ATTACKED WITH TYPHOID FEVER IN LARKHALL AND NEIGHBOURHOOD WEEK BY WEEK DURING SEPTEMBER, OCTOBER, NOVEMBER, AND DECEMBER, 1905.

	September				October				November				December				
Week ending,	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30
Persons																	
attacked,	1	12	33	44	12	3	4	7	2	1	1	1	—	—	1	—	—

TABLE B7.

TYPHOID FEVER IN LARKHALL AND NEIGHBOURHOOD.

THE NUMBER OF PERSONS ATTACKED, THE NUMBER OF NOTIFICATIONS RECEIVED, AND THE NUMBER OF PATIENTS ADMITTED TO HOSPITAL EACH DAY.

Date.	Persons Attacked.	Notifications Received.	Admissions to Hospital.	Date.	Persons Attacked.	Notifications Received.	Admissions to Hospital.
Sept. 8	1	—	—	Oct. 16	2	5	2
" 12	2	—	—	" 17	1	2	2
" 15	4	—	—	" 18	—	1	1
" 16	6	—	—	" 19	—	1	3
" 17	2	—	—	" 20	1	6	2
" 18	5	—	—	" 21	—	—	2
" 19	1	—	—	" 22	2	—	—
" 20	9	—	—	" 23	2	1	—
" 21	3	—	—	" 26	1	—	—
" 22	3	—	—	" 27	—	—	1
" 23	10	—	—	" 28	2	—	—
" 24	3	—	—	" 30	1	—	—
" 25	15	—	—	" 31	—	3	1
" 26	7	2	2	Nov. 3	1	1	1
" 27	3	3	4	" 4	—	2	2
" 28	5	—	—	" 7	—	1	3
" 29	7	8	7	" 9	—	2	—
" 30	4	7	7	" 10	1	—	1
Oct. 1	1	—	—	" 13	—	1	—
" 2	—	1	1	" 15	—	1	—
" 3	2	13	4	" 16	—	1	2
" 4	5	5	11	" 18	1	—	—
" 5	1	1	4	" 21	1	1	1
" 6	1	—	1	Dec. 3	—	1	1
" 7	2	5	12	" 7	—	—	1
" 8	—	—	1	" 10	1	—	—
" 9	—	2	5	" 11	—	1	—
" 10	—	2	5	" 13	—	—	1
" 11	1	11	4	" 14	—	1	—
" 12	2	13	6	" 20	—	2	2
" 13	—	13	5				
" 14	—	2	5				
" 15	—	—	—				
					122	122	113

TABLE B8.

LOCAL INCIDENCE OF TYPHOID FEVER IN LARKHALL AND NEIGHBOURHOOD.

DISTRIBUTION OF THE CASES ACCORDING TO STREETS IN LARKHALL,
DISTINGUISHING BETWEEN THOSE WHO OBTAINED MILK FROM THE
INFECTED SUPPLY AND THOSE WHO OBTAINED MILK EXCLUSIVELY FROM
OTHER SOURCES.

Locality.	The Number of Households invaded who obtained Milk		The Number of Persons attacked in Households who obtained Milk	
	Wholly or partly from Infective Supply.	Wholly from Other Sources.	Wholly or partly from Infective Supply.	Wholly from Other Sources.
Larkhall—				
Hareleeshill Road,	3	—	5	—
Hill Street, ...	4	—	10	—
Marshall Street, ...	2	—	6	—
Union „ ...	3	—	4	—
M'Neill „ ...	3	1	3	1
Percy „ ...	4	2	6	2
Montgomery Street,	3	—	3	—
Drygate Street, ...	2	1	3	1
Muir „ ...	1	—	1	—
Miller „ ..	1	—	1	—
Wellgate „ ...	1	—	1	—
Victoria „ ...	2	—	2	—
Cadzow „ ...	2	—	2	—
London „ ...	2	—	2	—
High Pleasance, ...	2	—	2	—
Academy Place, ...	1	1	1	1
Avon Street, ...	2	—	5	—
Croftbank, ...	1	—	2	—
Meadowhill, ...	4	3	6	4
Raploch Street, ...	1	—	1	—
Claud „ ...	—	1	—	1
Cherryhill, ...	2	—	3	—
Crossgates, ...	5	—	5	—
Burnhead, ...	2	—	3	—
Old Station House,	1	—	1	—
Millheugh, ...	—	1	—	1
Cornsillock, ...	6	3	12	3
Millburn, ...	1	—	1	—
Dalserf Station, ...	1	—	1	—
Tinto View, ...	—	1	—	1
Ayr Road. ...	4	—	12	—
Red Row, ...	—	1	—	1
Shawsburn, ...	—	1	—	1
Swinhill, ...	*1	—	1	—
	67	16	105	17
	83		122	

*This case was infected while living at Shawsburn.

TABLE B9.

TYPHOID FEVER IN LARKHALL AND OTHER PARTS OF THE PARISH OF
DALSERF IN THE YEAR 1905.

Locality.	Houses.	Estimated Population.	Typhoid Fever.	
			Houses Affected.	Persons Attacked.
Larkhall,	2,672	13,360	64	89
Millburn,	8	40	1	1
Cornsilloch,	63	315	9	15
Red Row,	55	275	1	1
Ayr Road,	47	235	4	12
Shawsburn,	38	190	1	1
Birkenshaw,	86	430	—	—
Swinhill,	128	640	1	1
Netherburn,	67	335	—	—
Dalserf,	15	75	2	2
Marlage,	15	75	—	—
Rosebank,	48	240	—	—
Woodside Rows,	30	150	—	—
Ashgill,	27	135	—	—
Ashgillhead,	24	120	—	—
Dykehead Rows,	25	125	—	—
Bog Rows,	25	125	—	—
Hill Terrace,	23	115	—	—
Howlethole,	9	45	—	—
Longlee,	6	30	—	—
Remainder of Parish,	156	782	—	—
	3,567	17,837	83	122

“We observe that the epidemic prevalence began in the week ending 16th September, and continued until the end of the month. During the latter half of September, 83 persons were attacked, and during the first fortnight of October only 15 persons, of whom 13 were probably secondary cases.

“Cases have occurred in almost every quarter of the town of Larkhall, and the total number of households affected was 64, with 89 persons attacked. Eight different localities, about two miles to the east and south of Larkhall, have also suffered, and the total number of households affected was 19, with 33 persons attacked.

“The heaviest incidence occurred between the 20th and 29th September, when 65 persons were attacked. Forty-three of this number were in Larkhall, and 22 in the neighbouring districts.

“The distribution within the town and the incidence in the places outside of Larkhall is of special interest in connecting the cases with the milk supply, and a map was prepared showing the route taken by the milk cart, cases having occurred in almost every street along the route.

“All these facts indicate that there has been some widely operating source of infection, and not such as occurs in personal or house-to-house infection.

“The *water supply* is from the upland sources of the Middle Ward Water District, which is distributed to many towns and villages where no typhoid prevails, so need not be further considered.

“The *milk supplies* are very numerous, there being about 23 registered dairymen selling milk in Larkhall and neighbourhood. Only a few of these dairymen are cowkeepers, so most of the retailers obtain their milk supplies from dairy farms at a distance. Many households obtain milk from two or more milk sellers.

“The first notifications were received on 26th September, and at the very commencement of the outbreak one of the milk supplies came under suspicion, as the first cases notified obtained the whole or part of their milk supply from one dairy. The Assistant Medical Officer of Health (Dr. Hislop) at once visited the dairy premises, but obtained no evidence of any recent illness among the inmates or those engaged in the dairy business. There was thus, on the one hand, as the result of inquiries made at the households affected with typhoid, a considerable amount of evidence that this milk supply was a source of infection: while, on the other hand, as the result of inquiries made at the places of milk production and distribution, a lack of evidence as to how the milk could have been infected.

“With considerable anxiety, the matter was kept under observation, and discussed with the staff day by day until the 3rd October, when there was a large increase in the number of notifications, which, after being inquired into, showed conclusively that the milk supply had disseminated the infection. We have now to consider. Was the milk still infective? The dairyman was visited and informed of what had happened. He was asked not to sell milk meanwhile, and have all those engaged in the dairy business examined medically and their blood tested for a typhoid reaction. He refused to submit to this test, and next day called at the office, feeling evidently very much aggrieved at the action taken. That afternoon, however, he indicated, through his law agents, his willingness to have the test applied. The dairy farmers were also advised to accede to our requests. On the 5th October the tests at the dairy and at one farm were made, with negative results. A note was given to that effect and the business resumed. The examination of the second dairy was not completed until the 8th October. Although a definite source of infection for the milk supply has so far not been discovered, we are not without good evidence that there was communication between a house in which one of the first cases occurred and the dairy premises,

and there must have been at some period, probably early in the month, accidental and temporary contamination of the milk supply. This is borne out by the further progress of the epidemic, which practically ceased at the end of September, thus pointing to some transient infection. In fact, the milk as a source of infection had ceased to operate before even the first cases were notified.

“The evidence of milk infection in this epidemic is at present even stronger than in that of 1898, when the source of infection was quite apparent. For example, the number of households affected in 1898 was 66, and of these only 46 obtained milk from the infected dairy. In the present epidemic the number of households affected is 83, and of these 67 obtained milk either wholly or partly from the infective supply.

“The area of distribution of the disease bears a close relation to the distribution of the milk supply. If reference be made to the preceding table, it will be seen that there are 3,567 houses in Lark-hall and other parts of Dalsersf Parish, and of these 83 have been infected with enteric fever, giving a proportion of one household affected to every 43 houses.

“On the other hand, it was found that milk was distributed to about 200 households, and 83 of these had been attacked, so that the proportion of households affected to households receiving milk from this dairy was about 1 in $2\frac{1}{2}$.

“The administrative measures adopted were the prompt isolation of each case, followed by disinfection of the premises and bedding.

“All patients removed were admitted to the Middle Ward Hospital, Motherwell, where the staff successfully met the requirements.

“Inquiry was also made into all cases of sickness suggestive of mild forms of the disease, and, to assist the recognition of doubtful forms, many blood specimens were taken for examination in the bacteriological laboratory.

“For instance, it was not an uncommon experience to find patients attributing their illness to influenza, a sick headache, or deranged stomach. In several instances the patients were even at work and had never been confined to bed, although actually suffering from the disease, and were only discovered by careful inquiry, at the houses visited, into what appeared to the inmates to be a slight indisposition. In many instances a house-to-house visitation was made, and the necessity of medical attendance urged in all cases of lesser ailments.

“Special attention was given to the sanitary arrangements. Open channels were cleaned, and ashpits and privies emptied and disinfected, wherever it was considered necessary.”

Hamilton Parish.—The average annual number of cases per annum was 7, a considerable improvement on the figures for the period 1896-1900, viz., 25. None of the cases calls for special mention.

New Monkland Parish.—The average annual number of cases recorded during the periods 1896-1900 and 1901-1905 was 15 and 8 respectively, a decrease of practically 50 per cent.

Old Monkland Parish.—The number of cases notified during each year was as follows :—63, 27, 29, 13, and 21. The heaviest incidence was, therefore, in the year 1901, when 40 cases occurred in Baillieston, 16 in Tollcross, 5 in Bargeddie, and 2 in Mount Vernon. It was evident from the inquiries made into the outbreak at Baillieston that the prevalence could not be accounted for by any general cause, such as a food supply or water supply, and that the main elements in the spread of the disease were the difficulties of diagnosis, and the consequent delay in taking preventive measures. At Macfarlane's Land, where 11 cases occurred, the first case was notified after being four weeks ill, and six other cases had sickened before the notification certificate was received. Many of the cases in this outbreak began in a most insidious fashion; at the commencement the illness was of a mild and trifling character, and a diagnosis was only made when the patient had been some weeks ill and frequently in a dangerous condition. In Dyke Street, where 18 cases occurred, the first case was that of a woman of 55 years, who had been three weeks ill when notified, and was then certified too ill to be removed to hospital, but even before notification she had infected two of her attendants. Another delay took place in the recognition of the disease in these secondary cases, and thus the disease spread.

Shotts Parish.—In the year 1901, 25 cases were notified, including 10 in West Benhar, while 3 other cases in Dykehead and Shotts were also infected from this source. These 13 cases occurred in five families, and were all traceable to infection imported into the rows from Dalziel Parish. The first case notified sickened on the 28th May, and the notification was received on the 14th June; but between January and June there were found to have been 4 cases, 3 of which had recovered and 1 died. In the family of the first notified case five others subsequently sickened, and in a neighbour's house four afterwards became ill, as a result of visiting. The spread of the disease in these rows was clearly demonstrated to have been brought about by direct personal infection.

1906-1910 (average population, 198,000).—The average annual number of cases recognised was further reduced to 205. The Parishes of Blantyre, Bothwell, Cambuslang, and Old Monkland had the greatest prevalence. Additional Special Districts were formed as follows :—*Drainage*, Newmains; *Scavenging*, (1) Carfin and Cleek-himin and (2) BLANTYRE (FORMED 26/3/09).

Blantyre Parish.—In the year 1906, 81 cases occurred, with 7 deaths. The majority of the cases occurred in Stonefield, and along the Glasgow Road. There was no epidemic prevalence until the months of September and October, the heaviest incidence falling during the fortnight ending 22nd September. Mild, unrecognised cases were found to be the means of spreading the disease within the houses, children especially being the cases so neglected. The number of cases notified during the two succeeding years was 17 and 44 respectively, mostly in the miners' rows. In the year 1909, 34 cases occurred, with one death, 20 of the cases occurring in Dixon's rows. Many of the cases were only discovered as a result of visits by the Assistant Medical Officer of Health. In the year 1910, 35 cases were brought to light, the distribution being in the usual areas.

Bothwell Parish.—The number of cases notified each year of the period was as follows:—60, 51, 57, 52, and 66, the average annual number of cases, compared with the figure for the preceding quinquennial period, being reduced from 80 to 57. In the year 1907 an outbreak occurred among the staff and patients at Kirklands Asylum. The institutional staff numbered 25, and the patients 216. The distribution of the disease was believed to have been due to an infected milk supply. This was obtained from a local dairyman, who purchased his supplies from a dairy farm near Glassford. At this farm the farmer's daughter, who assisted in the dairy business, took ill, and, although the medical attendant was at once consulted, the illness was not recognised as enteric fever for seven days. It is difficult to follow the manipulations of a milk purveyor, but, after careful consideration of all the facts and circumstances, the outbreak could be explained by milk infection at the farm—not a continuous infection, but slight contamination on two dates, with an interval of ten days. Altogether 23 people were believed to have suffered from the disease, and one of the attendants died in the County Hospital, Motherwell. During the remainder of the period no special incidence falls to be recorded, the prevalence of the disease being fairly evenly distributed.

Cambuslang Parish.—The number of cases occurring each year was as follows:—29, 14, 19, 51, and 36. The increased prevalence during the year 1909 was the result of an epidemic in the town of Cambuslang, caused by an infected milk supply, and the following information is extracted from the special report prepared at the time, and incorporated in the annual report:—

“*Cause of the Outbreak.*—The occurrence of 31 cases of typhoid fever within eight or ten days in houses some distance apart at once

suggests some widely operating source of infection. The sanitary circumstances—water supply, drainage arrangements, and sanitary conveniences—in the houses affected do not differ materially from those elsewhere, and, therefore, need not be discussed. The milk supplies in a town like Cambuslang are numerous, and in the area affected there are five or more purveyors of milk, yet in every family where typhoid fever has occurred the milk supply was wholly or partly obtained from one dairy. This dairy is situated at the corner of Clydeford Road and Mansion Street, where the present tenants, Mr. and Mrs. A., have carried on a dairy business for the last thirteen years, and for eighteen years previous to that they were employed at Flemington Farm. Their stock consists of 10 cows, most of which are in full milk, so that the average daily production is about 30 gallons. These cows were inspected by the Committee's Veterinary Inspector on 29th December, 1908, and nothing abnormal detected. Of course, cows do not suffer from typhoid fever, and do not produce milk containing typhoid germs. The cows are milked at 4 a.m. and 4 p.m., and the milk is distributed by six carriers—boys and girls—who commence the distribution in the morning shortly after six, and in the evening after coming from school. In addition, however, to their own cows' milk, this dairy receives from a wholesale milk purveyor in East Kilbride about 10 gallons in the morning and 8 in the evening. These supplies, however, are usually received after their own cows' milk is distributed, and are, therefore, sold separately.

“The sanitary arrangements of the dairy are satisfactory. Although the house adjoins the dairy premises, there is no connection between them, both having separate entrances off the public street. The milk-house is quite detached from the byre, and the boiler-house has the public water supply. The management of the business is highly spoken of, and the investigations made have revealed no cause for complaint. The business was usually managed thus:—Mrs. A. and her servant maid milked the cows and prepared the milk for distribution. Mr. A., who is in somewhat indifferent health through an accident, takes no part in these operations, but confines his attention to the cleaning of the byre, driving out the cattle, and such like. The only other inmate of the house is a grandchild.

“The illnesses of this household during the current year were briefly as follows:—In the month of March Mr. A. suffered from influenza, and was medically attended for about three weeks. In the month of April Mrs. A. was confined to bed for some weeks with an attack of rheumatic fever, and has since then been unable to pursue her usual duties. Her medical attendant assured me that her illness throughout presented no suspicion of typhoid. Both these inmates are over 60 years of age, and the investigations made, bacteriological and otherwise, confirmed the information of the medical practitioner. Towards the end of March the grandchild was removed to hospital suffering from diphtheria, and was discharged 14th April, free from infection on a negative swab. Mrs. A. and her maid have relatives residing in this locality, with whom visitation might take place. The inquiries made at these households revealed no evidence of any typhoid illness among them. In the maid's own home a brother and married

sister have both suffered from rheumatic fever, to which they seem to be subject, and specimens of blood gave negative results.

“Early in the month of April, owing to Mrs. A.’s illness, assistance in milking was obtained by engaging a Mrs. C., who resides in the same tenement, and who continued at that work until Saturday, 12th June last. She has two children, and her husband is a steel-worker, all in good health and circumstances. In January last, when they resided at Colebrooke Street, one of her children, a boy aged six, was attacked with typhoid fever. He was removed to hospital, where, after two days, his temperature became normal. A specimen of blood, however, gave a positive reaction. After a residence of forty days, he was discharged on 6th March, without having exhibited throughout the course of his illness any diagnostic symptoms or signs beyond the Widal’s blood reaction.

“Summarising the foregoing data, we note—

“(1) The outbreak of typhoid fever has so far been severely sharp, but of short duration, extending only for a few days, but affecting thirty-seven persons.

“(2) The outbreak can only be explained by the contamination of a milk supply for a day or so—say, about 24th to 26th May. This contamination probably arose through some unrecognised human source of infection not yet determined. It is significant, however, that typhoid fever has prevailed for some months in tenement dwellings not far distant from the dairy.”

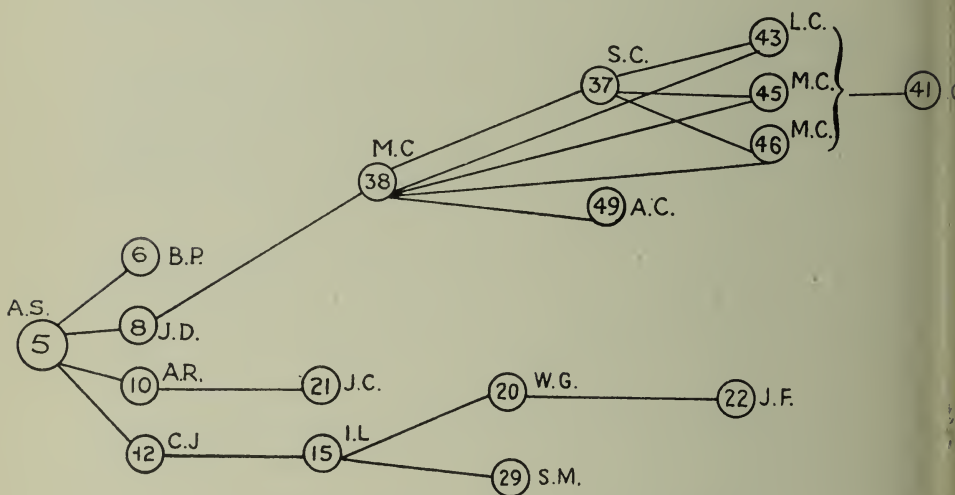
Cambusnethan Parish.—The number of cases occurring each year was as follows:—39, 13, 1, 21, and 13. In the year 1906 an outbreak occurred in Newmains, where there was reason to believe that milk supply was a source of disseminating the infection.

Dalserf Parish. — The incidence had by this time considerably diminished, the average annual number of cases being only 8, as compared with 40 in the preceding quinquennial period. None of the cases is of special interest.

Old Monkland Parish. — The number of cases notified each year was as follows:—90, 37, 25, 8, and 9. In the year 1906, no fewer than 52 of the total cases were in Baillieston, with 10 deaths. Most of the cases sickened during the last four months of the year. 38 of the cases were women or children under the age of 15, and 6 of the 10 deaths occurred in cases under that age. The fatality rate among children was 22 per cent., and amongst adults 16 per cent. This contrasts markedly with what is usually met with, viz., that the fatality rate is higher among adults than among children. The following narrative of the outbreak has been extracted from the annual report:—

“The first case was a lad of 16, who sickened on 7th January. He worked at a colliery where the last case notified in 1905 was employed, there being an interval of two months between the cases.

The next case was a boy of 11, who was removed to hospital in April, where the disease proved to be 'not enteric fever.' In May another case was notified; this was a servant girl who came home ill, and had probably contracted the disease outwith the district. During the next two months there were no cases notified, but in August a case occurred in a house attached to an ice-cream shop. Careful investigation failed to reveal any source of infection. The health of the other inmates of the house was carefully inquired into, and, after bacteriological examination, they were believed to have had no illness of a typhoid nature. No further cases occurred in the house, and none of the subsequent cases in the locality could be traced to the use of ice cream. The fifth case is of great interest, in respect that 16 of the subsequent cases were traced either directly or indirectly to it. This, therefore, is a good illustration of the remarkable influence of personal contact in spreading the disease, and is roughly indicated in the following diagram:—



The numbers denote the cases in order of notification.

The letters are the initials of the cases.

“The infective case was a woman, designated S., who was ill for 43 days prior to notification and removal to hospital. Among the frequent visitors to this house, four contracted the disease. In the house in which Case 12 occurred was a child who had suffered from diarrhoea, and two other children who had been sent out of the locality to a relative also suffered from diarrhoea. Blood examinations were made and proved negative, but in the relative's house to which two of the children had been sent a definite case of enteric fever occurred.

“Regarding the 31 cases remaining, the source of infection might be briefly referred to thus:—In one the disease was contracted outwith the district, in 12 there was a definite relationship to other cases, and in 18 only a general relationship was found, which will be referred to later. Summarising, we may say that in 3 cases

infection came from beyond the district, 28 were secondary to previously existing cases, and 21 could not be definitely traced.

“Causes of the Prevalence.”—The milk and water supplies, drainage, and general sanitary conditions were all carefully inquired into, and will be considered in turn.

“Milk.”—Among the families affected there were eight sources of milk supply, and at no time during the course of the epidemic could any causal relation be traced. Some of the milk sellers had customers beyond Baillieston, where no cases at all occurred.

“Water Supply.”—This is obtained from the Airdrie, Coatbridge, and District Water Trust, which distributes water over a very wide area to a large population.

“Drainage.”—All the houses are within a Special Drainage District, with public sewers. The house drains are connected, either by surface channels or by underground pipes. It was found that some of the manholes in the old sewers, as well as untrapped road surface gulleys, gave off offensive odours. At the north end of Buchanan Street complaints were numerous, also near the car terminus. Although some cases of enteric fever occurred in houses near these places, the disease was equally prevalent in other parts of the town. The Engineer, in a report dated 28th January, 1907, states that the sewer at fifteen of the manholes is provided with sumps, which allowed a retention of solid matter and the production of offensive odours. It might be mentioned that the Committee have arranged for the filling up of these sumps.

“Schools.”—21 children of school age were affected; of these, 12 attended the public school, 8 attended St. Bridget’s R.C., and 1 went to Glasgow. It could also be shown that 14 of these children were definitely related to previous cases.

“Occupation.”—Coal-mining is the chief industry in and around Baillieston. 10 of the male and 2 of the female patients were employed at Calderbank Pit, where the sanitary conveniences were not all that could be desired. The last case notified in 1905 and the first in 1906 were both employed here, but the other 9 were known to have been frequent visitors at infected houses, or to have been in actual contact with infected members of the same household.

“General Sanitary Conditions.”—The houses consist mainly of two classes—single-storey miners’ rows and tenement property. With few exceptions, the houses are of long standing, and, although not comparable to miners’ houses more recently erected elsewhere, were on the whole comfortable, and situated in an open country district. Most of the houses affected were of two apartments, and the average number of inmates in each house was about ten, so there was a tendency to overcrowding. Facilities for cleanliness were sadly wanting in many of the properties. In many cases the water had to be carried from the street. Some houses had inside sinks, but in many they were outside. The back areas and front entrances were unpaved, and, what was worse, many back areas were saturated with human

filth, through that method of excrement disposal known as the common privy-midden. The question of forming a Special Scavenging District for Baillieston has been under consideration.

“*Summary.*—Reviewing the information submitted, we observe—(1) We are dealing with an area where, year in year out, enteric fever has occurred. (2) In certain years the prevalence has so increased as to be considered epidemic. (3) In the spread of the disease neither water, milk, or other food supply has been concerned. (4) There has been a distinct grouping of cases in certain properties, where the most common sanitary defect has been the want of proper facilities for promoting cleanliness, and especially the existence of privy-middens. (5) The disease affected children under 15 years of age to the extent of one-half of the cases.

“In seeking to explain the spread of the disease, two factors stand out prominently—(1) the delay in recognising the disease when it occurred, and (2) the facilities that exist for spreading the infection. If the cases be classified according to the number of days which elapsed between the date of onset of symptoms and the receipt of notification, we obtain the following results:—

Days.	-5	-10	-15	-20	-25	-35	-45	Total.
Cases,	5	23	11	2	4	2	1	48

“Thus 9 of the cases had been about 20 days ill before being recognised. Three cases were only recognised by means of Widal’s blood test, and the time which had elapsed from the onset of illness was considerable—probably two or three months. The number of specimens sent for bacteriological examination by practitioners was only ten, so that very little use was made of the laboratory as an aid to the early recognition of the disease.

“*Preventive Measures.*—48 cases were removed to hospital, and 1 was treated at home, where effective isolation was possible. Many of the cases were removed before being notified. The remaining 3 cases were discovered by Widal’s test so long after the illness had occurred that they were not removed to hospital. The affected houses were all disinfected, and in many cases the bed and bedding taken to hospital for steam disinfection. Chloride of lime was also freely used in and around the privies and ashpits of the affected houses.”

In the following year, 1907, 37 cases were notified in the Parish, including 10 in Baillieston, some of which were distinctly traceable to cases notified during 1906.

Shotts Parish.—The number of cases notified during each year of the quinquennial period was as follows:—1, 2, 17, 6, and 6. In the year 1908, when 17 cases were notified, 16 were in Dykehead locality. This outbreak was believed to have been associated with a local water supply. The public supply had been introduced to the village, but the main pipe terminated just beyond, forming a “dead end,” and the people complained that the water was not suitable for potable

purposes. They therefore resorted to a local spring, which collected in a pool, where sometimes the pitchers were charged by being dipped in the well. The character of the outbreak, as shown by the dates of sickening, was of a somewhat explosive character. The first case sickened on or about the 19th May, and was followed by cases all sickening within the first ten days of June. As the first case admitted to having frequented the open pool whence the water was obtained, it is easy to understand how the water could have assumed for a time infective properties.

1911-1915 (average population, 207,000).—The average annual number of cases in the District was reduced to 113. During the period five Special Scavenging Districts were formed, the largest of which were (1) Holytown, New Stevenston, and Carfin, in 1911; (2) Baillieston; and (3) Larkhall, the last two being formed in 1914. Special Drainage Districts were formed—(1) Shotts and Dykehead, in 1912; and (2) Holytown and New Stevenston, early in 1915.

Blantyre Parish.—There was a great reduction in the number of cases, the number for each of the years being 9, 6, 5, 5, and 3. This reduction is believed to have been largely due to (1) the removal of privy-middens, which have played so large a part in facilitating the spread of the disease; (2) the introduction of water-closets and modern sanitary conveniences; and (3) the improvement in the general cleanliness of the urban area which has followed the formation of the Special Scavenging District. Occasionally, through mistaken diagnosis, patients have been removed to general hospitals in the city of Glasgow; for example, one case in 1911 was admitted to the Glasgow Western Infirmary, complaining of pain in the abdomen. Before an operation could be performed, patient had a severe hæmorrhage, and became so weak that the operation had to be postponed, the case terminating fatally. A Widal test done shortly before death proved negative, but at the *post-mortem* examination a large number of ulcers was found in the intestine, and the case was considered one of typhoid fever. This may be regarded as an ambulant case of typhoid, and might have remained unrecognised but for the occurrence of the hæmorrhage.

Bothwell Parish.—The number of cases notified each year was as follows:—65, 25, 24, 25, and 21. The heaviest incidence, therefore, during this period, was in the year 1911, and 44 of the 65 cases notified occurred in Bellshill and Mossend. No facts of special

interest emerged as a result of the investigations of the Assistant Medical Officer.

Cambusnethan Parish.—The number of cases notified each year was as follows:—16, 7, 24, 6, and 4. Of the 24 cases which occurred in 1913, 14 were notified from Stane. One of these cases, a boy of $2\frac{1}{2}$ years, is of special interest. His stay in hospital was protracted, because of the persistence of typhoid bacilli in the urine. After a residence of five months he was discharged, with the bacilli still present. The parents received careful instructions regarding the disinfection of the urine and fæces, the Health Visitor called frequently, and specimens of urine were sent to the Laboratory monthly for examination. These were still found to contain numerous typhoid bacilli. Three months after the child went home the Assistant Medical Officer of Health visited the house. The whole family were well, and specimens of blood from all who had escaped the disease were found to be negative. In another outbreak in the village, it was found that a child had recently died, the death being certified as “Diarrhœa—7 days.” The rest of the inmates were said to have had no recent illness, but specimens of blood were tested, and two found positive.

Dalserf Parish.—The number of cases notified from year to year was as follows:—10, 22, 5, 20, 41. The prevalence in 1912 was confined almost entirely to a group of miners’ rows, known as Meadowhill. Investigations by the Assistant Medical Officer of Health showed that typhoid fever existed in some four or five families without the true nature of the illness being recognised. The sanitary conveniences consisted of water-closets situated in blocks of four, and fitted with automatic flushing cisterns. The slop water was thrown into the surface drains which run alongside the dwellings. Dry household refuse was collected in ashbins, and removed weekly by the owner, there being at this time no Special Scavenging District.

Dalziel Parish.—Of the 16 cases occurring during the five years, 13 were notified in 1913, when an outbreak occurred at some miners’ rows, known as Ravenscraig. The water supply to these rows was gravitation from standpipes, and there were two privy middens of great size, waste water being carried off in surface channels. Great difficulty was experienced in making inquiries into the cause of the outbreak, as the people were disposed to hide their illnesses, especially among the children and their friends. In one family frequently visited by the Assistant Medical Officer of Health, the mother on no occasion

would admit of recent illness either in herself or the family, but specimens of blood proved positive.

New Monkland Parish.—The number of cases occurring each year was as follows:—23, 28, 1, 3, 11. Eight of the 23 cases in 1911 occurred in Glenboig, the others being widely distributed. The localities chiefly affected in 1912 were Caldercruix, Glenboig, Longriggend, and Whiterigg.

Old Monkland Parish.—The incidence had become much reduced, the number of cases notified during each year being as follows:—8, 6, 14, 16, and 2. Ten of the cases occurring in the year 1913 were notified in Bargeddie. These cases occurred in separate families living close together, and it was only by a house-to-house inspection that suspicious cases of illness were discovered. In one family permission to take specimens of blood was refused. A feature of the outbreak was the considerable number of cases discovered giving either (1) a history of suspicious illness, with symptoms so slight as to be altogether neglected or unrecognised, and yet giving bloods positive to Widal's test; or (2) a positive Widal, with no history of illness at all. Those mild and ambulant cases, living in houses where the privy-midden system prevailed, explain the spread of the disease.

From 1914 to 1918 the records of infectious disease had to be curtailed, as, owing to the depletion of the staff (both medical and clerical), it was not possible to carry out the usual investigations, and nurses had to be employed to act as inspectors. In 1914 there were 86 cases, Bothwell, Dalserf, and Old Monkland being the parishes chiefly affected. In 1915 there were 97 cases, Bothwell, and particularly Dalserf, being once more the parishes mainly affected.

1916-1920 (Average population, 212,000).—In the year 1916 the number of cases recorded declined to 73, Bothwell and Dalserf being the parishes chiefly involved. In 1917, 86 cases were notified, chiefly in Bothwell and Shotts Parishes. In 1918 the incidence had increased to 108 cases, occurring mostly in Bothwell and Dalserf Parishes.

While 103 cases were brought to the notice of the Department in 1919, 28 were found not to be suffering from the disease, leaving 75 genuine cases. Among the diseases sent into hospital as enteric fever were influenza, encephalitis lethargica, tuberculosis, erysipelas, pneumonia, and anaemia. Although the Widal test was positive in all these cases, it was found negative in several cases with definite clinical enteric fever. In *Dalserf Parish*, 56 cases occurred, all in the

town of Larkhall, no fewer than 28 being in Meadowhill Rows, and some of the others being proved to be associated with these. In almost every instance personal contact with a previous case could be traced, the number occurring among friends and relations being very marked. Two or three cases in one family was common, but in one family six, and in another seven, cases occurred among members of the same household. There is no doubt the infection of enteric fever is frequently present in an unrecognised form among the people resident in Meadowhill, and that the housing conditions which exist there at present favour the spread of the disease.

In the year 1920, 63 cases were notified in the whole of the District, this being the lowest number recorded, and the fatality rate is also low, being 9·5 per cent. The chief factor in promoting the spread of the disease was personal contact, especially with mild cases, the true nature of which often remains unrecognised until the occurrence of a subsequent case of definite clinical type. The tracing of such unrecognised cases is often rendered more difficult by the unwillingness on the part of relatives to give a full history of recent illnesses in the household, but the examination of the blood of all contacts for Widal's reaction has now become practically a routine measure in the investigation of cases. Where a positive result was obtained in the absence of definite clinical symptoms, patients were removed to hospital for observation, and for bacteriological examination of the excreta. During this year *Blantyre Parish* had only 4 cases, and *Bothwell Parish*, 7. 25 cases, with 3 deaths, occurred in *Dalserf Parish*. In 3 of these the Widal test was positive, but there were no clinical symptoms. In other 5 cases the patients were found to be suffering from some other disease. About one-half of the persons attacked resided in Meadowhill Rows, where overcrowding and insanitary conditions were so conducive to the spread of the disease. There was reluctance on the part of the people to seek medical advice, and also unwillingness to have patients removed to hospital. One patient was admitted to hospital at the end of the seventh week of her illness, she and her relatives even then protesting against removal.

Nine cases occurred in Glenboig, in *New Monkland Parish*, in three families residing in contiguous one-apartment dwellings. The sanitary conditions here were most unsatisfactory. The drainage was by surface channels close to the door, and the excrement disposal by midden privy. The ashpit and privies have now been demolished altogether.

1921-1924 (Average population, 228,000).—The number of cases recorded annually throughout the District was as follows:—106, 46, 62, and 38.

Blantyre Parish. — The decline of the disease has been most marked in this parish, only 14 cases occurring during the four years.

Bothwell Parish.—15 cases were recorded during the year 1921, 8 being in Bellshill, directly associated with each other, and affecting two families occupying adjoining houses in a tenement. In one of the cases the urine was found to contain typhoid bacilli. On inquiries being made, it was ascertained that unrecognised enteric fever had been present among the younger children for about seven months. In 1922, 18 cases occurred, including 3 of a paratyphoid type among the staff of Kirklands Asylum. The following year 11 cases occurred, one of which was traced to a "carrier," who was kept under observation.

Dalserf Parish.—The number of cases notified from year to year was as follows:—66, 8, 14, and 4. Of the 66 cases occurring in 1921, 59 were in Larkhall, and again Meadowhill Rows had the heaviest incidence. The first cases were detected by the nurse inspector. The disease has been so persistently present in these rows for a number of years that it is almost certain that some of the dwellers are "carriers." The spread of the disease is favoured by the proximity of the houses, overcrowding of single apartments, and by the fact that many of the residents are related to each other, in consequence of which inter-visitation, especially during illness, is frequent. The sanitation of the rows is still of a low standard. The majority of the patients who developed the disease were children, ten being under 12 years of age—a fact of much importance, in view of the frequency with which the surroundings of the houses are soiled by excreta. There was also considerable negligence on the part of the patients and their friends in obtaining early medical advice, which may be to some extent due to the aversion to removal to hospital. Thus, by concealment of the disease, infection was rapidly spread. In one instance, five members of a family were infected by a hidden case in another house. In the years 1922, 1923, and 1924 the disease had declined considerably in the parish, but cases occurred in Meadowhill each year, except the last.

Shotts Parish. — 7 of the 9 cases notified during 1921 were in the mining village of Harthill. All the patients resided in miners' rows, where the midden-privy system prevailed. Here again there

was considerable delay in recognising the disease. There was also evidence of the medical attendant misinterpreting the value of Widal's test, as, having obtained a negative result in three cases, although there was abundant clinical evidence of enteric fever, he failed to notify the cases. In 1923, 9 additional cases occurred in Harthill.

Avondale Parish. — 7 of the 9 cases recorded during the four years were notified in 1923. This figure included 5 cases in the family of the caretaker at Kype Water Works. Serological tests indicated the infective agent in these cases to be the *Bacillus Typhosus B*.

Thus closes the Middle Ward record, with the disease almost extinct. The gradual progressive decline of the prevalence with the advance of sanitation is most marked in areas such as Baillieston, Bellshill, and Blantyre.

UPPER WARD DISTRICT.

This district is largely rural, although there are one or two populous places of an industrial character, such as, in Carluke Parish, Carluke and Law; in Lesmahagow Parish, Lesmahagow and Coalburn; and in Carnwath Parish, Carnwath, Forth, and Wilsontown.

The incidence of the disease according to parish is given in the following table:—

TOTAL INCIDENCE OF THE DISEASE ACCORDING TO PARISH IN THE
UPPER WARD DISTRICT IN QUINQUENNIAL PERIODS.

Parish.	Population Census, 1911.	Total Number of Cases of Enteric Fever.						
		1891- 1895	1896- 1900	1901- 1905	1906- 1910	1911- 1915	1916- 1920	1921- 1924
<i>Chiefly Industrial—</i>								
Carluke, - -	9,619	69	45	21	30	5	6	—
Carmichael, - -	1,471	—	1	—	2	2	—	1
Carnwath, - -	6,446	61	34	3	2	7	3	1
Carstairs, - -	1,878	10	4	3	4	3	—	—
Douglas, - -	2,509	—	—	1	3	—	1	—
Lanark, - -	3,078	7	11	7	—	1	2	—
Lesmahagow, -	11,990	79	36	53	22	10	4	1
<i>Chiefly Agricultural—</i>								
Biggar, - -	605	—	—	1	—	—	—	—
Covington, - -	385	1	1	—	—	—	—	—
Crawford, - -	1,520	4	3	3	—	1	—	—
Crawfordjohn, -	617	1	—	2	—	1	—	1
Coulter, - -	372	—	—	1	—	—	—	—
Dolphinton, - -	245	—	—	—	—	—	—	—
Dunsyre, - -	175	—	—	—	—	—	—	—
Lamington, - -	271	—	—	—	—	—	—	—
Libberton, - -	461	—	—	—	—	—	—	—
Pettinain, - -	261	—	—	—	—	—	—	—
Symington, - -	420	2	—	—	—	—	—	—
Walston, - -	255	—	—	—	—	—	—	—
Wiston, - -	400	2	1	8	—	—	1	—
Total, - -	42,978	236	136	104	63	30	17	4

The disease is now dealt with in quinquennial periods:—

1891-1895.—During this period the population of the district averaged 37,340, and the average annual number of cases amounted to 47. The deaths per 100 cases were 14.

The disease was not made notifiable until the middle of July, 1891, but, as the greatest prevalence is generally in the autumn months, the bulk of the cases in that year were ascertained.

The only hospital accommodation in which the District Committee had an interest was the joint-hospital for the Burgh and Parish of Lanark, having a total of 8 adult beds.

During this period the following special districts were formed:—Carluk Water and Drainage, 1891; Law Water and Drainage, 1891; Crawford Water, 1891; Douglas Water and Drainage, 1891; Crosslaw Drainage, 1894; Lesmahagow Drainage, 1891; Lesmahagow Water, 1895; and Coalburn Water, 1895. No special scavenging districts were formed, although in the village of Douglas scavenging was regularly carried out, and it is interesting to note that no case of enteric fever occurred in this village until the year 1905.

The incidence of the disease in parishes during this quinquennial period was as follows:—Carluk, 69; Carnwath, 61; Carstairs, 10; Covington, 1; Crawford, 4; Crawfordjohn, 1; Lanark, 7; Lesmahagow, 79; Symington, 2; and Wiston, 2.

The parishes of Carluk, Carnwath, and Lesmahagow are now dealt with:—

Carluk.—The disease was very prevalent in the years 1891 and 1894, and occurred chiefly in miners' rows on the outskirts. The disease appeared to be associated with filthy surroundings, overcrowding, direct personal infection, and lack of means of proper disinfection.

In the mining village of Law the disease was prevalent in 1894 and 1895. Although a special drainage district was formed in 1891, the scheme was not completely in operation until 1894. Direct infection undoubtedly contributed to the spread of the disease. The cases occurred in the autumn months, and three cases occurred in one family, all notified on the same date.

Carnwath.—In this parish the sanitary conditions were unsatisfactory, and in the village of Haywood the greatest prevalence

occurred. No less than 30 of the 61 cases occurred in this village. The houses (brick structures, in rows) were supplied with water from standpipes at considerable intervals, and the sanitary conveniences consisted of midden privies. In the villages of Forth and Wilsontown, adjoining, 16 cases occurred, and here sanitary conditions, although not so bad as Haywood, could not be considered satisfactory. In the mining village of Tarbrax 7 cases occurred.

Lesmahagow. — The disease appeared in various parts of the parish, but the only two places where it was actually prevalent was in the village of Kirkmuirhill and the hamlet of Lairsbridgend. In the village of Kirkmuirhill the disease appears to have been distributed over the five years, the prevalence being 6, 4, 5, 2, and 2 cases respectively. In Lairsbridgend, however, no less than 21 cases occurred in the years 1892 and 1893, only affecting 8 families. From the records very few particulars can be ascertained, but, on classifying according to family and month, the following table is interesting :—

	A.	M.F.	C.	G.	M.W.	B.	K.	M.
1892—February,	1	—	—	—	—	—	—	—
April,	—	1	1	1	1	—	—	—
May,	—	—	—	2	—	1	—	—
July,	—	—	—	2	—	1	—	—
1893—May,	—	—	—	—	—	1	—	—
July,	—	—	—	—	3	1	3	1
August,	—	—	—	—	1	—	—	—
	1	1	1	5	5	4	3	1

Direct contact in this outbreak, with probably unrecognised carriers, was responsible for the spread of infection. The first four cases occurred in separate families, but in the fourth family no less than five cases occurred within a short period. No case of the disease was notified from July, 1892, until May, 1893, when it again became prevalent. It is interesting to record that only one further case occurred in this hamlet in the year 1896, when a member of the family G., again the fourth family to be infected, was notified as suffering from the disease.

1896-1900. — During this period the population of the district averaged 38,770, and the average annual number of cases of enteric

fever was 27, a decrease of 20 per annum on the previous quinquennial period. The deaths per 100 cases were 17.

During the first part of this period a number of cases were removed to the County Hospital, Stonehouse, and towards the autumn of 1897 the District Hospital at Roadmeetings was opened. Difficulty, however, was experienced in obtaining removal to hospital.

Special districts were formed in the following localities:—Carluké Scavenging, 1900; Carnwath and Carstairs Junction Water, 1896; Douglas Scavenging, 1900; and Kirkfieldbank Water, 1896.

The incidence of the disease according to parish was as follows:—Carluké, 45; Carmichael, 1; Carnwath, 34; Carstairs, 4; Covington, 1; Crawford, 3; Lanark, 11; Lesmahagow, 36; and Wiston, 1.

The more important outbreaks are now dealt with in detail:—

Carluké.—The bulk of the cases occurred in the town of Carluké, although a few cases occurred in the village of Law. In the year 1896, eleven cases occurred in the town of Carluké in seven families, the cases occurring in the months of January, April, May, June, July, and August. At Mauldslie three cases occurred in the month of December and one case occurred early in 1896.

The cases at Law were no doubt a continuation of the prevalence in the previous year, 1895, as all three cases occurred in the month of January, 1896.

In the year 1897, the disease was again introduced into the town of Carluké by a servant girl from the City of Glasgow. Similarly at Law, a case came from Stonehouse and infected several others before the case was recognised.

In the year 1900 the most serious outbreak was in a property known as “Moulders’ Buildings,” in the town of Carluké, where nearly the whole family suffered. The first case to sicken was an imbecile child, who was kept at home and nursed by the mother, with the result that she and two other children also suffered, and were all subsequently removed to hospital. It is significant that an outbreak of a severe type of enteric fever occurred some years previously, thus pointing to an unknown carrier of the disease.

Carnwath.—In the year 1896 seven cases occurred in the village of Haywood, and were a continuation of the outbreak of the previous year, all the cases occurring in the months of January and February.

The cases at Tarbrax, Forth, and Wilsontown were spread over the whole quinquennial period, the yearly distribution being as follows:—1, 5, 3, 2, and 2. A case at Bogside Farm, Forth, may be worthy of special mention, viz.:—A servant girl sickened from enteric fever on 25th June, was notified on 30th June, and removed to hospital on 2nd July. She entered the farm service on 29th May, and had only been from the farm once, and that was when visiting her home in Wilsontown, where no enteric fever existed.

The tenants of the farm were said to have suffered from gastric fever about 20 years before in Forth, where they then resided. The inmates were Mr. and Mrs. P. and sister, two sons and two daughters, a niece, and servant girl. In the year 1897 a servant girl was notified as suffering from enteric fever at this farm, and it was alleged that other similar illnesses had occurred on other occasions.

An outbreak in one family in the village of Carnwath in the year 1900 is also extremely interesting, the following being the notes made when the outbreak was investigated:—

“Visited Carnwath on January 18th and 23rd in connection with some cases of enteric fever in a family there. The cases were as follows:—

Initials of Name.	Age.	Onset.	Notified.	Occupation.
W.S.	20	Dec., 1899	Not Notified	Fireman in Motherwell
A.S.	16	Jan., 1900	Jan. 14th	On Railway
S.S.	13	Dec., 1899	„ 6th	Scholar
G.S.	8½	Jan., 1900	„ 23rd	Scholar
R.S.	6	„ „	„ 23rd	Scholar
J.S.	3½	„ „	„ 16th	—

Note.—In addition to the above, a child aged 20 months, a grandchild of Mrs. S., and residing with her, was ailing for over a month, suffering from broncho-pneumonia. The illness commenced about the middle of December.

“There are ten inmates in this house of 4 apartments. Six of these are over 12 years and four under 12 years. The house, which is of two storeys and stands by itself, belongs to the occupier, who lives on the ground floor and lets the upper storey. The entrance to the ground floor is at the front, and to the upper storey by a stair at the back. There is a privy and ashpit. The water supply is Carnwath gravitation.

“*Source of Infection.*—In the early part of December, 1899, W.S., a fireman in Motherwell, residing at Nichol’s Buildings, Ladywell Road, went home ill to Carnwath, and lay there for three weeks before a medical man was called in. When Dr. G. had examined the patient he told Mrs. S. that he had suspicion of enteric fever, and she replied that it was not that, as he had often been in the same state,

and worse, before. Dr. G. thought that it might be so. The patient soon recovered, and finally returned to his work on 8th January. Meanwhile a boy, S., had been complaining, and Dr. G., after diagnosing the illness as enteric fever, came to the conclusion that the first case had been suffering from the same disease, and this was confirmed by the subsequent succession of cases. On 23rd January, with the help of Dr. G., I obtained the mother's consent to allow the removal of the patients to Roadmeetings Hospital, and arranged accordingly. At my previous visit, on 18th January, I tried to persuade Mrs. S. to let the children go to hospital, putting everything I could think of before her, among others, the fact that she had not the strength to nurse the patients continuously for many weeks if others in the house were attacked, but although she would not then give her consent, this was readily obtained on 23rd January, because she was worn out with work, and, in fact, had the appearance of sickening from the disease herself."

Lanark.—In the year 1898 an outbreak occurred at Cleghorn under the following circumstances. The two families affected were next-door neighbours, and may be designated N. and F. About the 10th April the N. family came from near Maryhill, in the County of Dunbarton, to this locality, bringing with them a boy convalescing from an attack of enteric fever. The father stated that the boy was quite recovered, but it was ascertained from another source that he looked as though he had not fully recovered from the illness, and certainly proved infective. This boy N. played with the F. boys, and on April 26th R.F., aged 6 years, sickened, and about 7th May A.F., aged 8 years, sickened. Both cases were notified on 17th May, and removed to hospital same day. About this date a child N., aged 3 years, sickened, and was ailing for some time. The cause was said to be "teething," but there were some symptoms suggestive of enteric fever. Medical aid was not considered necessary. On May 27th Mrs. N., aged 27 years, sickened, and Mr. N., who was complaining of not feeling very well when visited by the Assistant Medical Officer, was subsequently notified as suffering from enteric fever. It was elicited that he had been complaining for about three weeks, and had been off work prior to notification. Both parents were removed to hospital on 10th June. The boy was no doubt infective when he left Maryhill.

Lesmahagow.—Throughout the quinquennial period the cases occurred in widely scattered areas. In 1897 three cases occurred at Kirkfieldbank in one family, under circumstances which pointed to the infection having been imported. In 1900 four cases occurred at Coalburn, the first case being a lodger, who infected other three cases. The source of infection in the first case was not traced.

1901-1905.—During this period the population of the Upper Ward District averaged 41,000; the average annual number of cases amounted to 21, and the deaths per 100 cases amounted to 18.

During this period special districts were formed in the following localities :—Carnwath Drainage, 1902; Braidwood Water, 1901; Forth Water, 1905; Thankerton Water and Drainage, 1902; and Roberton Water, 1902.

The incidence of the disease according to parish during this quinquennial period was as follows:—Biggar, 1; Carluke, 21; Carnwath, 3; Carstairs, 3; Crawford, 3; Crawfordjohn, 2; Coulter, 1; Douglas, 1; Lanark, 7; Lesmahagow, 53; Symington, 1; and Wiston and Roberton, 8.

Details of the various outbreaks were as follows:—

Carluk.—During this period the disease was confined to the town of Carluke and the village of Law, while one case was notified from Braidwood which later proved not to be enteric fever. The prevalence in the town of Carluke was during the years 1901 and 1902, when 14 cases occurred, and in at least two instances the disease was imported into the town. At Law 5 cases occurred in the years 1903 and 1904.

Carnwath.—In this parish there was a remarkable decline during this quinquennial period, the total number of cases being 3, compared with 34 in the previous quinquennial period.

Lesmahagow.—The distribution of the cases according to locality was as follows:—Lesmahagow, 5; Blackwood, 1; Coalburn, 1; Auchenheath, 11; Tillietudlem, 28; Crossford, 1; Hazelbank, 2; and Kirkfieldbank, 4.

The outbreaks of special significance were at Tillietudlem and Auchenheath, and, as the water supply was suggested as a possible source of infection, a special report was submitted to the Local Authority as follows:—

“Fence Rows, Tillietudlem, comprise about 30 houses in five different one-storey rows, and are situated to the south-west of the hamlet, from which they are distant about half a mile. These houses are within the area of Auchenheath water supply, which serves about 190 houses in three distinct areas. The largest is Auchenheath village, where there are about 120 houses; then Longlea Terrace, Dunrum, where there are about 30 houses; Fence Rows, about 30 houses; and Tillietudlem Terrace, 10 houses, situated immediately to the east of Tillietudlem Station. This water supply has been frequently

reported upon to the Local Authority, and is obtained from a source which receives drainage from cultivated fields. The analyses made from time to time show that it is not of high organic purity, but I have never been able to detect any evidence that it was the actual cause of disease. The last inspection made prior to the outbreak of typhoid fever was in July, 1902. The inspection then made shows that there was no special liability to pollution at that time. When the present outbreak of typhoid fever occurred the water supply was suspected, and an examination again made with similar results. It must be clearly kept in mind that typhoid fever is an infectious disease, capable of being communicated from the sick to the healthy, especially among the poor, who neglect or cannot carry out ordinary precautions, isolation, disinfection, &c. Typhoid fever is also a disease which assumes a great variety of forms, many of the types being of such a mild nature that medical aid is not summoned, or the symptoms may be so indefinite that a medical practitioner fails to make an early diagnosis. The spread of the disease in Lanarkshire has been almost entirely due to this cause, and experience elsewhere also shows that infected water supplies have in recent years played but a subordinate part in the spread of this disease. When a water supply does become infective, the distribution of the disease follows more or less that of the area of water supply. At Fence Rows 16 cases were notified in 11 families, and, as showing the influence of personal infection in the dissemination of the disease, it may be mentioned that, in a family where removal to hospital was objected to, no less than three secondary cases occurred. In two families 2 cases occurred in each, and a case in each of other two related families. The weekly incidence, arranged according to the date of sickening, is shown in the following table:—

	August	September					October					November	
Week ending	28	4	11	18	25		1	8	15	22	29	5	12
Cases, ...	1	3	0	5	1		1	0	2	1	1	0	1

“At Auchenheath Farm 3 cases occurred. The date of onset of the first case could not be definitely ascertained, but there was a history of indefinite illness for some time, so that it is probable the two following cases were infected by this one.

“At Townfoot two cases occurred in one family, the patients being nursed at home.

“The Assistant Medical Officer and Sanitary Inspector have gone over the whole area of water supply, and found no evidence of the existence of the disease in the other localities which receive Auchenheath water. We are therefore warranted in concluding that the water supply is not infective, and is not the cause of the cases of typhoid fever at Fence Rows, Biggarseat. There is probably a population of about 1,000 persons in the different localities supplied by this water, and yet only a few houses in one locality have suffered. The sanitary circumstances at Fence Rows, Biggarseat, are not at all satisfactory; in the row of houses first visited the water is drawn from taps in the sculleries at the rear of the houses; all other houses draw

their supply from a tap on the public road. The conveniences are privy ashpits, and one of these was found in a most insanitary condition, and the ground surface in close proximity to the dwellings polluted with excremental matter. I understand the Sanitary Inspector has been dealing with the offensive privy ashpits and other insanitary conditions.

“In connection with this outbreak 24 specimens of blood were examined in the Bacteriological Laboratory. Most of the specimens were forwarded by the medical attendant, with a view to an early confirmation of his diagnosis. If medical advice had been obtained in all cases of indefinite illness, and the same procedure adopted, along with proper isolation, there is reason to believe the number of cases would have been considerably fewer. In connection with visits made by the Assistant Medical Officer, some specimens were taken with a view to ensuring that no unrecognised case of enteric fever existed in any particular family. I might be allowed to express my appreciation of the assistance given by the medical attendant in our endeavours to prevent the spread of the disease.”

Sanitary conditions at Fence Rows and various other properties in the neighbourhood were carefully inspected. Several of the privies were found in a filthy and insanitary state, while all the ashpits were in a very unsatisfactory condition. The respective owners were communicated with and latterly were met on the ground, when suggestions were made as to the sanitary improvements required.

Wiston and Roberton.—Six cases were notified in this parish in 1901, but the most careful inquiry failed to trace the exact source of infection. There seemed to be the possibility of the disease having been brought by a wandering pedlar, who had lived in one of the infected houses and was frequently in contact with the neighbouring house, but the man's movements could not be traced.

Two cases occurred among navvies employed at Roberton Water Works, but every precaution was taken to prevent the spread of the disease.

1906-1910.—During this period the population of the Upper Ward District averaged 42,340; and the average annual number of cases amounted to 13 and the deaths per 100 cases amounted to 17.

The only special district formed during this period was Lesmahagow Scavenging in the year 1910.

The incidence of the disease and parishes was as follows:—Carluke, 30; Carmichael, 2; Carnwath, 2; Carstairs, 4; Douglas, 3; Lesmahagow, 22.

Details of the various outbreaks were as follows :—

Carluke.—The disease was again confined to the town of Carluke and the village of Law, while 2 cases occurred at Braidwood; the largest prevalence being in the town of Carluke in the years 1906 and 1907. The first case notified was in the month of February, and was a young student who visited Carluke only for week-ends. In the month of July a brother of this case sickened, and about the same time other 5 cases occurred. In September 2 cases were notified in Law, but the source of infection was not ascertained. In the year 1907 eight cases occurred at Gill Row, the cases occurring mainly towards the end of August and the beginning of September. Five cases were reported, all more or less related, and all sickening within 10 days or so of one another. On investigation being made, it was found that a child in one of the houses had been ill a week or two previously with diarrhœa, but, in view of later developments, there seems little doubt that the child had been suffering from unrecognised enteric. In the year 1908 other 2 cases occurred in this row in the month of July, which seems to indicate an unrecognised carrier of the disease.

Lesmahagow.—The bulk of the cases in this area occurred in the years 1906 and 1907, there being no cases in the years 1908 and 1909, and 4 in the year 1910. In the year 1906 seven cases occurred at Fence Rows, and were no doubt a continuation of the outbreak in the previous quinquennial period. Two further cases occurred in the following year, and one in 1910. Since this date there have been no further cases in this locality. The other cases throughout the parish were widely distributed.

1911-1915.—During this period the population of the Upper Ward District averaged 43,630; and the average annual number of cases amounted to 6, and the deaths per 100 cases amounted to 23.

During this period the following special districts were formed, viz. :—Carstairs Water, 1914; Ponfeigh Water, 1914; Symington Water, 1912; Carstairs Junction Scavenging, 1914; Leadhills Scavenging, 1912; and Crosslaw Scavenging, 1914.

The incidence of the disease, according to parish, was as follows :—Carluke, 5; Carmichael, 2; Carnwath, 7; Carstairs, 3; Crawford, 1; Crawfordjohn, 1; Lanark, 1; and Lesmahagow, 10.

The only outbreak worthy of mention was that in the parish of Carnwath in the year 1913, particulars of which were as follows:—

“Mrs. S., age 35. Onset, 6/1/13. Notified, 23/1/13. Removed to hospital, 23/1/13. On notification being received a visit was paid by the County Medical Officer, and, on inquiry being made, it was found that the patient had for three weeks previous to her own illness been nursing her sister, resident in the Burgh of Lanark. The latter had been removed to St. Mary’s Hospital, Lanark, suffering from what was thought to be jaundice, but which on examination proved to be typhoid fever. A specimen of blood was taken, which confirmed the diagnosis, and, in the absence of suitable accommodation at the time in the Burgh Hospital, she was removed to Roadmeetings. Mrs. S. died in the District Hospital. The primary source of infection was not found. This one unrecognised case was shown to be responsible for five other cases, as follows:—

Mary G., age 6, Wilsontown. Onset, 25/1/13. Notified, 3/2/13. The father of this patient is known to have visited Mrs. S. prior to her removal to hospital.

Mrs. J. F., age 32, Haywood. Onset, 31/1/13. Notified, 3/2/13. Patient is a sister-in-law of Mrs. S., and visited and nursed her at Wilsontown after her return from Lanark. She had been in the habit of taking her two children with her to the house, and the younger child, mentioned below, was usually put into the bed occupied by Mrs. S.

Andrew F., age 3, Haywood. Onset, 1/2/13. Notified, 3/2/13. Removed to hospital, 4/2/13. Child of Mrs. J. F. Was put into bed with Mrs. S. while his mother attended to the house and patient.

James J., age 5, Wilsontown. Onset, 29/1/13. Notified, 8/2/13. Removed to hospital, 7/2/13. Son of Mrs. J. G. Nursed by Mrs. S., and lodged and slept in the same bed with the latter after his mother was removed to hospital. Two other brothers living with friends showed no symptoms.

Mrs. W. A., age 37, Wilsontown. Onset, 25/8/13. Notified, 6/9/13. Removed to hospital, 6/9/13. Patient nursed her sister-in-law (Mrs. G.) for three weeks prior to her own illness. It was thought that Mrs. G. was also suffering from typhoid fever, but a negative Widal reaction was obtained and she was not notified.

1916-1920.—During this period the population of the Upper Ward District averaged 44,530, and the average annual number of cases amounted to 3. The diagnosis in some cases was not confirmed. During this period there was only one death, giving a fatality rate of 6 deaths per 100 cases.

The following special districts were formed during this period, viz.:—Coalburn Drainage, 1920; Blackwood Drainage, 1920; Forth

Scavenging, 1919; Carnwath Scavenging, 1920; and Haywood Scavenging, 1920.

The incidence of the disease, according to parish, was as follows:—
 Carluke, 6; Carnwath, 3; Douglas, 1; Lanark, 2; Lesmahagow, 4; and
 Wiston, 1.

1921-1924.—During this period the population of the Upper Ward District averaged 47,440. Only four cases were notified, one in 1921 and three in 1923, one of the cases having a fatal result.

The following special districts were formed during this period, viz.:—Crossford and Hazelbank Water, 1923; Braidwood Drainage, 1921; Carstairs Drainage, 1923; Ponfeigh Drainage, 1922; Law Scavenging, 1922; Carstairs Scavenging, 1923; Ponfeigh Scavenging, 1922; and Blackwood Scavenging, 1922.

The incidence of the disease, according to parish, was as follows:—
 Carnwath, 1; Crawfordjohn, 1; Lesmahagow, 1; and 1 in the
 Western Infirmary, the patient having been admitted there from the
 Parish of Carmichael.

LOWER WARD DISTRICT.

This district adjoins the City of Glasgow, and is of a suburban and agricultural character. Prior to the year 1912 the towns of Shettleston and Tollcross were in the district, but the Corporation of Glasgow annexed practically one-half of the Lower Ward area at that time, including these two populous places and the whole of the Parish of Govan.

The incidence of the disease according to parish is given in the following table:—

TOTAL INCIDENCE OF THE DISEASE ACCORDING TO PARISH IN THE
LOWER WARD DISTRICT IN QUINQUENNIAL PERIODS.

Parish.	Population.		Total Number of Cases of Enteric Fever.						
	Census 1911	Census 1921	1891- 1895	1896- 1900	1901- 1905	1906- 1910	1911- 1915	1916- 1920	1921- 1924
Glasgow or Barony, -	35,081	8,757	152	69	136	123	24	4	3
Cadder, -	15,328	16,041	69	91	21	27	16	18	3
Carmunnock, -	747	835	1	6	2	2	—	—	—
Govan, -	2,394	—	13	35	30	35	4	—	—
Rutherglen, -	4,024	4,299	20	28	13	13	8	4	1
	56,974	29,932	255	229	202	200	52	26	7

The disease is now dealt with in quinquennial periods:—

1891-1895.—During this period the population of the Lower Ward District averaged 30,800, and the average annual number of cases of enteric fever amounted to 48. The deaths per 100 cases amounted to 18.

Special drainage districts were formed in the following localities:—Barony (including Shettleston and Tollcross), 1891; South Lenzie, 1891; Carmunnock, 1891; and South Govan, 1895.

For the isolation of infectious diseases the Lower Ward District Committee at first relied on accommodation at Belvidere Fever Hospital, Glasgow, and cases from Govan Parish were treated at Shieldhall Fever Hospital, Govan. A few cases were also treated at Knightswood Hospital, Partick. With the extension in 1891, the Corporation of Glasgow intimated that they would require all the accommodation at Belvidere. It was therefore necessary that hospital accommodation should be provided, and, after discussion with

the Middle Ward District, it was agreed to erect a joint-hospital (sixty beds) at Lightburn, near Shettleston. In the year 1894 a temporary hospital was provided at Lightburn, containing twelve beds, and this hospital served until the permanent hospital was completed in April, 1896.

The total incidence of enteric fever according to parish was as follows:—Barony or Glasgow Parish, 152; Cadder, 69; Carmunnock, 1; Govan, 13; and Rutherglen, 20.

Barony or Glasgow Parish.—The prevalence in this parish was mainly confined to the town of Shettleston, on the outskirts of the City of Glasgow, where the disease assumed epidemic form in the years 1891 and 1895. In the year 1891, 34 cases occurred in Shettleston during the last five months of the year, when the disease was compulsorily notifiable. The most serious epidemic, however, occurred in the year 1895, when 67 cases were notified, the outbreak occurring during the months of September, October, and November. The following is a quotation from the Annual Report for that year dealing with this outbreak:—

“There was no unusual incidence of the disease in any particular age or sex, nor was it confined to one neighbourhood, the cases having occurred in houses situated, in some instances, as widely apart as the extreme limits of the locality.

The incidence was greater in the newer tenement houses than in the old cottage class of property.

“Up till 5th October the features of the outbreak were those presented by the usual autumnal prevalence of the disease, consisting of sporadic cases having nothing in common to which the infection could be traced, although occasionally associated with sanitary defects. But the sudden increase in the ensuing fortnight, and especially the fact that four members of one family took ill on the same day, and two members of a second family on another day, pointed to a common cause.

Milk Supply.—The sources of supply in Shettleston are very numerous. In fifteen families, with twenty cases, there were at least seven separate supplies, and mostly brought from a distance; but in eight families, with fifteen cases, the supply had been obtained from a local dairy.

This dairy was situated in the centre of Shettleston, and in close proximity to the house where the first case occurred. It supplied some sixteen families in the vicinity regularly with milk. On the 28th September one of the inmates of this dairy was notified as suffering from enteric fever. On the usual inquiry being made by the Inspector, it was ascertained that this person had been ill since 14th September, and nursed during that time by one of the family, who also took part in the dairy work, attending to milk vessels, &c. The Sanitary Inspector at once advised the immediate stoppage of the

dairy business, which the owner willingly carried out. Of the sixteen families supplied by the dairy till 28th September, seven, or over 40 per cent., have suffered from the disease, as well as two other inmates of the dairy itself, who also consumed the milk. These cases all sickened between the 6th and 15th October, and, as fourteen days is the average period required for the development of the disease, the infection probably took place just before 28th September.

The facts which at present seem to implicate this dairy as a probable agent in disseminating the disease are the presence of enteric fever in the dairy, and the possible contamination of the milk therein; the heavy incidence of the disease among consumers of this milk supply; and the epidemic character of the incidence.

It is satisfactory to note that the sale of milk was stopped by the Sanitary Inspector as soon as he became aware of the presence of enteric fever in the dairy.

At the individual houses invaded the usual precautions have been taken by isolation (either in hospital or at home), disinfection, and the removal of nuisances, where these existed. The speedy removal of all household refuse, which at present accumulates in ashpits (some of them dangerously near the dwellings), as could be attained by the formation of a special scavenging district, would do much to improve the sanitation of this locality, and diminish the liability to the spread of enteric fever. While the milk supply may have been responsible for the cases which occurred in the early part of October, there are about an equal number of cases which cannot so be accounted for."

Although cases occurred in Tollcross, adjoining Shettleston, each year, with the exception of 1893, these were few in number.

Cadder Parish.—69 cases occurred in this parish during the quinquennial period, but these were in widely scattered areas. In the Annual Report for 1891 reference is made to the unsatisfactory nature of the water supply, especially in Gartcosh, Stepps Road, and Garnkirk. These places were dependent for their supplies on shallow wells, streams, and pits, all of which were liable to contamination by sewage and other refuse. In this year (1891) 19 cases of enteric fever occurred at Gartcosh and neighbourhood, these being reported on as follows:—

"Gartcosh is a village of about 500 inhabitants, dependent almost entirely on the ironworks of Messrs. Smith & M'Lean, round which the houses are built. These works and adjoining houses are dependent for their water supply on an open stream which skirts the works, and which receives the sewage of several houses higher up. This water, so liable to contamination, is pumped up and passed through a series of small filters, and then distributed to the works and the dwelling-houses. Of the whole series of cases, the only thing in common was that they used this water. In more than one instance boys who were temporarily employed at the works, and had drunk of the water, were attacked with typhoid, even although they lived at some distance from what might be called the infected area. In every instance,

without exception, the persons attacked used the water from the stream referred to, and this fact is of the greatest significance, as pointing to the source of infection."

The only outbreak worthy of mention is one at Lenzie in the year 1893, when the following report was submitted to the Public Health Committee, viz. :—

"On Tuesday, 16th May, I received information that several cases of enteric fever had occurred at Lenzie, but was unable to visit the locality that day, having to appear as a witness in an important sanitary prosecution at Hamilton.

"On Wednesday morning I visited some of the cases with the Sanitary Inspector. Our attention was drawn to a dairy in the Burgh of Kirkintilloch as being the probable immediate source of the disease. Inquiry into the circumstances connected with this dairy pointed to the milk supplied from Netherhouse Farm as being the ultimate source of infection. We accordingly visited this farm, having previously asked the medical attendant to meet us there, and found that the tenant had been ill for at least a fortnight, although not so seriously as to be confined to bed. After a careful examination, the medical attendant and I were of opinion that the patient was suffering from an attack of typhoid or enteric fever, and we ordered his isolation in a room of which he is the only occupant, and quite unconnected with the dairy or cowshed.

"On the previous day, from the facts which the Sanitary Inspector had laid before me, I had instructed him to stop the sale of milk from the farm.

"In that part of Lenzie situated in the Lower Ward, seven cases had been notified, but we have reason to believe that no fresh cases are likely to occur."

1896-1900.—During this period the population averaged 39,324; the average annual number of cases amounted to 47, and the deaths per 100 cases amounted to 13.

Lightburn Joint Hospital (60 beds) belonging to the Lower and Middle Ward District Committees was opened in May, 1896, and the temporary one (12 beds) was sold to the Upper Ward District Committee.

The following special scavenging districts were formed :—Bishopbriggs, 1897; South Lenzie, 1896; and Shettleston and Tollcross, 1896.

The prevalence of the disease, according to parish, for the whole period was as follows :—Barony or Glasgow, 69; Cadder, 91; Carmunnock, 6; Govan, 35; and Rutherglen, 28.

Barony Parish.—There were no outbreaks of special importance in this parish, and the majority of the cases were again in the town of Shettleston, although the prevalence in this locality shows a decided decrease when compared with the previous quinquennial period. This decrease may be associated with the formation of a special scavenging district for Shettleston and Tollcross in the year 1896.

Cadder Parish.—In the year 1896, 19 cases occurred in this parish, 6 of these being connected with the milk supply of a dairy farm where one of the employees had suffered from a doubtful illness. In the year 1897 the disease was entirely absent from the area of the South Cadder Special Water Supply District, and was confined to areas where the water supply and general sanitation was deficient. In the year 1898 a small outbreak occurred in a tenement property at Auchinairn, these cases being associated with other cases of illness of an indefinite type. To those unrecognised cases the spread of the disease was, no doubt, due. In 1899, 11 cases occurred in seven families at Lochfaulds Row. The first illness occurred in July in a house where two children sickened of the disease in August, and from that time until the end of the year cases continued to occur in adjacent dwellings. In a house where 4 cases occurred the first that sickened was a lodger whose illness was not recognised until other inmates were attacked. In the same year an outbreak occurred at Gartcosh, the first case to sicken being ill for a month before being notified, and for the greater part of that time he was not confined to bed, but went about in his ordinary way. In the year 1900 an outbreak of the disease occurred associated with Littlehill Dairy Farm, and it is interesting to quote the following extract from the Annual Report for that year :—

“Early in October 3 cases were notified as having occurred in the family of a dairy farmer, and, subsequently, 2 cases occurred. The dates of onset of illness were respectively 28th September, 3rd October, 5th October, and (2 cases) 11th October. The first two cases were removed to hospital on the 9th October, and the 2 latter cases on the 12th October. The milk supply was stopped from the 8th to the 11th, and precautions taken to prevent it being infected.

“Repairs had been going on at this farm for some considerable time, and among the tradesmen employed was a lad who resided in a neighbouring town, under a burgh local authority. This lad sickened between the 22nd and 28th September, and there was reason to suppose that he had been infected from the same source as the above cases.

“Such a series of cases, undoubtedly, pointed to a common source of infection, and, after carefully considering all the circumstances,

could best be explained by some unrecognised case in the household. The Sanitary Inspector was, therefore, advised to make careful inquiries, which resulted in his obtaining information, from which the following facts were elicited:—

“The dairyman’s mother-in-law up till about the middle of April resided in the City of Glasgow, but gave up her house, and brought with her such household effects as were sufficient to furnish a room. This widowed lady had suffered from a serious illness, commencing early in October, 1899—an illness which confined her to bed, required nursing for seven weeks, and received medical attendance. The illness was said to have been of the nature of influenza. It was accompanied with fever and diarrhœa, and was followed by great weakness. A specimen of blood taken in April was examined by Widal’s test, and a strong positive reaction of enteric fever obtained (dilution, 1 in 50—reaction in 20 minutes). We further learned that this old lady had visited two families where enteric fever had occurred. We may, therefore, for the following reasons, conclude that the illness she had suffered from at the close of the year was a severe attack of enteric fever:—

“First, she had been, undoubtedly, exposed to infection on two or more occasions; second, the history of the illness and the clinical symptoms were suggestive of enteric fever; and third, the strong positive reaction by Widal’s test. It is now a well-authenticated fact that the infection of enteric fever may linger with a patient for weeks or even months after having recovered from an attack, so there is reason to believe that infection might have been imported to this dairy farm in the person of the old lady coming from the City. It may be asked—If this person were the source of infection causing the outbreak in the farmer’s household between the 28th September and 11th October, how can we explain the lapse of time between the importation of infection about the middle of April and the manifestation of the disease? I can only answer—it is known that the germs of enteric fever may not only live, but even multiply outside the human body, and it is not uncommon to find intervals of time elapsing between the introduction of infection to a locality and its manifestation, as in the above outbreak.

“There is, however, reason to believe that infection may have manifested itself at this dairy farm in the month of June.

“On the evening of July the 5th, I received a telegram from the City Medical Officer of Health, to the effect that there was enteric fever in the City due to the milk supply from this dairy farm, and that the water supply required investigation. The Assistant Medical Officer went off that same evening, and, after a consultation with the City Medical Officer of Health, agreed to visit the farm next day in company with the City Bacteriologist, who took samples from a well said to have been used by the farmer for dairy purposes. The result of this examination was, I understand, of a negative character, no organisms being found resembling the bacillus of enteric fever, or suggestive of sewage pollution. According to the official report of the City Medical Officer of Health, 34 cases of enteric fever occurred in the City among the customers of a dairyman carrying on business near New City Road, whose principal source of supply was from the

dairy farm in question. The milk produced at this dairy farm was disposed of every morning by a milk cart to three different customers, as follows:—To the dairyman whose milk supply seemed to be infected, 30 gallons; to another dairy, 32 gallons; and to a third, from 10 to 12 gallons; and small quantities were sold to neighbours.

“There seems no reason to doubt that the outbreak in the City was attributable to a milk supply, but the farmer—who promptly and willingly gave effect to all the instructions or requests that were made in the matter of precautions—naturally raised the question, how could we account for the fact that only the milk supply of one of his customers was affected, and they all came from the same source and underwent the same treatment? To this question no answer, so far as I know, has yet been given, and while I would not entertain any consideration which might lead to delay in the adoption of preventive measures, it seems to me incumbent upon local authorities and their officials that every advantage should be taken to profit by experience, and in the careful investigation of such outbreaks all facts should be elicited that would tend to the advancement of our knowledge of the etiology of infectious disease. Prevention is based upon experience, and experience is limited by powers of observation and inquiry. Assuming, however, that the milk supply from this dairy farm was infected early in June, how are we to account for the infection?

“As regards the water supply, there is, apart from the bacteriological examination, no evidence whatever in support of the view that it could be concerned. The facts are briefly as follows:—

“During the progress of some alterations on the farm, which included the introduction of Loch Katrine water, a standpipe had been erected for the use of the tradesmen, and this supply was wholly used up till the 24th of May, when it was cut off for some weeks before the alterations were completed. During this time the farmer assures me he brought Loch Katrine water from another standpipe, and that for other purposes water was carted from a local source known as ‘Wallace’s Well.’ So far as the source of supply is concerned, Loch Katrine water is above suspicion, and ‘Wallace’s Well,’ although in the matter of construction not all that could be desired, was the source of supply for a number of houses with a population of 57, in which no enteric fever whatever prevailed. If then the water supply was at all concerned, it could only be through local infection at the farm.

“The members of the dairy-farmer’s household who escaped having enteric fever were the eldest son, aged 14 years, who had driven the milk cart for the past year and had no illness whatever, and the three next of the family, aged 5, 3½, and 1 year 10 months respectively. The dairy farmer himself had had enteric fever in his youth.”

Govan Parish.—The majority of the cases in this parish occurred amongst the inmates of Merryflatts Poorhouse and were mostly persons admitted as paupers from adjoining burghs and said to be suffering from influenza, diarrhœa, &c.

Rutherglen Parish.—Cases occurred in this parish each year, but the greatest prevalence was in the year 1899, when 14 cases occurred, 12 of these cases occurring in the months of August, September, and October.

1901-1905.—During this period the population averaged 45,740, and an area with a population of 5,462 was annexed to the Burgh of Govan in the year 1901. The average annual number of cases amounted to 40, and the deaths per 100 cases amounted to 13.

During this period a special scavenging district was formed for Chryston and Muirhead in the year 1902, and two special drainage districts, viz., Rutherglen, 1905; and Bishopbriggs and Auchinairn, 1905.

The incidence of the disease, according to parish, for the whole period was as follows:—Barony or Glasgow, 136; Cadder, 21; Carmunnock, 2; Govan, 30; Rutherglen, 13.

Barony Parish.—The largest number of cases occurred in the town of Shettleston in the year 1901. Seven cases occurred at Threestone-hill, a group of four small cottages occupied by ploughmen, but these cases did not seem to be associated in any way with other cases occurring in Shettleston at the same time. In the town of Shettleston no definite source of general infection could be traced, and it appears likely that the connecting links in the chain of infection were some unrecognised cases, as in a number of instances there had been previous illness in the family of an indefinite character, and in one which proved fatal, death was attributed to dysentery.

In 1902 the cases in this parish decreased, and the following extract from the Annual Report is interesting:—

“The outbreaks in Shettleston and Tollcross were all more or less associated, and show the influence of personal infection and the circumstances under which the disease spreads. Three of the cases were miners working in the same pit and taking their food together. In one family, where three cases occurred, the usual inquiries made by the inspector elicited the fact that the father of the family had also suffered from an ailment which might have been typhoid fever, and, as his illness occurred six weeks prior to the other cases, it might have been a source of infection in the cases notified. I accordingly arranged for a specimen of blood from the father to be examined, and, on this being done, it was found to give a positive reaction of typhoid fever. Taking this fact, together with the clinical information obtained, there was little reason to doubt that this was the first

typhoid illness in the family, and that the three cases notified had been infected from the father.”

In the year 1903 the cases were again due to personal contact. In Tollcross one case was notified, who appeared to be a typhoid carrier, it being stated that the boy had had a severe attack of enteric fever 5 years previously. Again in 1904 a considerable number of cases occurred in Shettleston, and in almost all these cases the infection was traced to previous cases. Other two cases were notified at Threestonehill, where an outbreak occurred in 1901, previously referred to.

No outbreaks of any special import occurred in any of the other parishes, the majority of cases in the parish of Govan again occurred in the parochial hospital.

1906-1910.—The population during this quinquennial period averaged 53,100; and by an extension of the Burgh of Rutherglen in 1906 the population was reduced by 3,000. The average annual number of cases amounted to 40, and the deaths per 100 cases amounted to 8.

During this period the following special districts were formed, viz.:—Stepps Drainage, 1906; Rutherglen Scavenging, 1907; and Stepps Scavenging, 1909.

The incidence of disease, according to parish, during the period was as follows, viz.:—Barony or Glasgow Parish, 123; Cadder, 27; Carmunnock, 2; Govan, 35; and Rutherglen, 13.

Barony Parish. — The disease was again fairly prevalent in Shettleston and Tollcross over the whole period, but the most interesting outbreak in this parish was in the year 1907 at Possil and Lambhill, where a dairy farm was involved, and this was associated with an outbreak of the disease in the City of Glasgow. The following extract from the Annual Report of that year deals with this outbreak:—

“On the 20th December last, information was received by telephone that some five cases of enteric fever had occurred in the City and in Partick, associated with a particular City milk supply; that one of the sources of this milk supply was Parkhouse Dairy Farm, Possilpark. Although the information then elicited was to the effect that the milk was not distributed to the families affected, inquiries were at once made by the Assistant Medical Officer, Dr. Hislop.

“On the 21st December he visited the farm, and found one of the inmates (J.G.) had been confined to bed from 10th December, and was attended by a medical practitioner, who was at once sought for. Not being found, Dr. Hislop left a note explaining the object of his visit, along with an outfit for taking a blood specimen. A reply letter, received on the 23rd, explained that the patient was first seen on the 12th December, when the symptoms were those of influenza; on the 13th the symptoms were similar; on the 14th the temperature had almost fallen to normal; and on the 16th and 18th was practically normal. The outfit left for taking specimens of blood had not been used by the medical practitioner, as he did not consider that was necessary. As the symptoms described in the letter did not exclude typhoid fever, we wired the medical practitioner to send a specimen of blood from the patient. On the 24th December this was obtained, with the usual clinical information, which stated that the patient now had pneumonia on right side. On examination the blood specimen gave a good positive result. Dr. Hislop then had a consultation with the medical practitioner, who left the case in his hands. He then went to the farm and had the patient removed to Lightburn Hospital that evening. Since admission to hospital the patient has shown the clinical symptoms of pneumonia, and, but for the positive blood test, the illness could hardly be diagnosed as typhoid fever.

“The usual precautions were taken in the matter of disinfection. The City authorities were at once informed, and several interviews and joint-inspections have taken place since then. It is not yet clear what relation the first group of cases in the City bears to the milk supply from Parkhouse Farm. Subsequent investigations have been directed towards determining how infection was introduced to Parkhouse Dairy Farm, and, so far, without any definite result. It may be mentioned that, from about the 21st November, R. G. took 10 gallons of milk from the Kelvinside Dairy, to be delivered at the Hydepark Locomotive Works for the use of employees who lunch there. It occasionally happened that a small quantity was left over, and this he took back to his own farm, where it was mixed with their own supply, and the patient (J.G.) believes that she has used some of this milk at times for herself.

“The previous tenant of Parkhouse Farm died on 6th May, 1907, from pneumonia, after four days' illness, and the other inmates continued in good health. The present tenant came to the farm about the 1st August, along with his sister, the patient. The other employees were a hired servant, Mrs. C., who resided at Possilpark, and a lad who lived at the farm. A brother of the tenant paid a visit of a week's duration about 26th August, and came to reside on the 25th November. After the illness occurred, the mother came from her farm at Borestone, Beith. All these people appeared to be in perfect health, and have not suffered recently from any illness suggestive of typhoid fever.

“The milk supply at this dairy farm is obtained from 18 cows, and is consigned every morning to a large dairy business at Kelvinside. The evening milk is retained overnight in the milkhouse, and in the morning is skimmed. It is thus despatched along with the

morning's milk, and makes up in all about 40 gallons. It arrives at the Glasgow dairy about 6 a.m., but how it is disposed of there seems difficult to determine. I understand the milk from the dairy farm at Parkhouse was, from the 29th November, not sent out with the milk cart distributing milk to the first group of cases, and that from the 19th December it was sterilised. As the first group of five cases in the City, associated with one cart's milk supply from a Kelvinside dairy, sickened between 5th and 11th December, and as the disease takes on an average from 12 to 14 days to develop, it is evident that the outbreak of typhoid fever at Parkhouse Dairy Farm could not have any causal relation to the Glasgow cases. All subsequent inquiries have gone to show that J. G. was in her usual health up till 7th December; on the 8th she had headache, but continued at work; on the 9th she was sick, and took to bed that evening. It is sometimes difficult from the insidious nature of the disease to be sure of the onset of typhoid fever, but in this case there seems to have been no difficulty. Some of the milk was sold locally to about thirteen families, including the schoolhouse, station-house, and adjacent terrace, and one or two families in Lambhill.

"Although the epidemic prevalence of typhoid fever in the City of Glasgow has not yet been fully investigated, there is reason to believe that about eighty persons have suffered through having partaken of a particular milk supply; and, although the illness at Parkhouse Dairy Farm cannot account for the first cases, there is reason to fear that it may prove largely responsible for a number of cases sickening between 20th December and the 2nd January.

"As there was no evidence of other illness at the farm, and the examination of blood specimens from the inmates was negative, attention was turned to Mrs. C., an elderly person employed on the farm as a milker, and who had suffered from enteric fever 16 years ago. Specimens of fæces from this person were examined by the City Bacteriologist, who has been able to isolate the typhoid bacillus from the specimens.

"No epidemic of enteric fever in recent times has given rise to so much public discussion and criticism as that which took place in the City of Glasgow, and attributed to the milk supply from Parkhouse Dairy Farm. Dr. Chalmers' special report dealing with this outbreak is dated 17th February, 1908, and shows that 92 persons were infected in the City of Glasgow and 21 in the Burgh of Partick. The first cases sickened about 8th December, and the last about 13th January. These cases included three at Flemington Farm, from whence the milk was distributed.

"The whole of this prevalence has been explained by assuming that the infection was introduced to Parkhouse Dairy Farm by Mrs. C., the female dairy worker; that she infected the milk which gave rise to the cases sickening up to 21st December; that she also infected J. G., who gave rise to the cases after 21st December. When the outbreak at Parkhouse Dairy Farm was being investigated, it was ascertained that Mrs. C. had been employed as a dairy worker from the end of August, residing in her own home at Possilpark up till 28th November, when she went to reside at Parkhouse Farm. This

date seemed somewhat significant, as J. G.'s illness began about 7th December, and she was confined to bed on the 10th December, that is, 12 days after Mrs. C. went to reside at the farm. The Medical Officer therefore suggested, about 16th January, that Mrs. C. should be asked to reside at the hospital for a day or so, in order that stools and urine might be properly taken for bacteriological examination. Arrangements were made accordingly, and she was admitted on the 22nd.

"Accepting the results obtained by Dr. Buchanan, City Bacteriologist, as showing the presence of infectivity, and that Mrs. C. must be considered as a chronic typhoid carrier, her past history assumed great importance. When Mrs. C. suffered from typhoid fever about 16 years ago, she was living in Swan Street, Port-Dundas, in the City of Glasgow. She had nine of a family, and her brother was a lodger with her at the time. The whole family suffered from typhoid fever, except two. Subsequent to that date, Mrs. C. had been largely occupied at dairy farms, at some of which she was employed as a milker, yet there is nothing in our records to show that she gave rise to a milk epidemic. When residing in the County area, at Blackhill, one of her children (B. C.), aged 10 years, sickened with typhoid fever about the end of May, 1901, but this case may have been associated with a previous illness in the neighbourhood.

"It seems remarkable that Mrs. C. should have been employed in no fewer than seven dairy farms in the Lower Ward area without giving rise to typhoid fever if she were a chronic bacilli carrier. About 10th January the milk supply from Parkhouse Dairy Farm was no longer sent to Flemington Dairy Farm, but to another dairy in the City, and, although Mrs. C. continued to work in the Parkhouse Dairy for 12 days, milking cows, &c., no typhoid illness occurred in connection with the City dairy milk supply."

Cadder Parish.—The largest number of cases in this parish occurred in the year 1906, when 14 cases were notified. Ten of these cases occurred at Bishopbriggs, in Brown's, Ure's, and White's Lands, in the months of August, September, and October. The first case to sicken was a young man, who had been ailing for some time before his illness was definitely recognised to be enteric fever. The next to sicken were two companions of this patient, who might have visited him during his illness, although this was emphatically denied. In another instance, information was received from Campbeltown regarding a girl who had just come there from Brown's Land. When the Sanitary Inspector visited he found that a child in this family, where the girl had resided, had been ailing for some time, and had infected the girl before leaving for Campbeltown. Another child in the house sickened about the date of his visit.

Govan Parish.—The cases in this parish occurred in the parochial poorhouse, and they all came from areas outside the County.

1911-1915.—The population of the Lower Ward District during this period averaged 40,534. The population was reduced by 28,490 persons at the end of the year 1912 by the extension of the City of Glasgow, the extensions including the towns of Shettleston and Tollcross and the whole of Govan Parish. The average annual number of cases during this period amounted to 10, and the deaths per 100 cases amounted to 19.

No special districts were formed during this period.

The total incidence of the disease for the whole period, according to parish, was follows:—Barony or Glasgow, 24; Cadder, 16; Govan, 4; and Rutherglen, 8.

Barony or Glasgow Parish. — In the year 1911 ten cases were notified in the villages of Millerston and Hogganfield. About the middle of September two cases were reported, and careful investigations were at once made by the Public Health staff, with the result that within one week six clinical cases had been recognised and five positive contacts; these were persons who manifested no symptoms of the disease, but from examination of the blood were believed to have passed through a typhoid illness. All the families affected, except one, lived in one tenement property, and there is no doubt that the infection was spread by personal contact. In 1913 other two cases occurred in this tenement, both cases being members of families who had been affected in 1911. In the year 1914, in connection with an outbreak of the disease in the Dennistoun district of Glasgow, investigations were made at a farm in the Lower Ward area.

Cadder Parish.—In the year 1911 a small outbreak occurred in the village of Gartcosh. In this locality cases of typhoid fever occurred in previous years at varying intervals. Towards the end of August one or two cases occurred in a tenement property. Careful investigations were made with the result that, within two weeks, 4 clinical cases were discovered. This small outbreak illustrates the manner in which the disease can be spread by personal contact through mild unrecognised cases. Four families were affected, and all lived close to one another. The first to sicken were two adult female workers, and in the month of July, or early in August, both these persons suffered from some slight illness of an indefinite nature. No medical attendant was called in, and it was only when specimens of blood were taken that the nature of the illness was diagnosed. Subsequent cases occurred in these two families, which were no doubt traceable to the earlier unrecognised cases. In 1912 four cases occurred in one family at Bishopbriggs. These occurred in a two-

apartment house, with eight occupants, and the opportunities for the spread of infection were manifold.

1916-1920.—The population of the Lower Ward District during this period averaged 30,000; the average annual number of cases amounted to 5; and the deaths per 100 cases amounted to 4.

A special drainage district was formed for Gartcosh in the year 1920.

The incidence of the disease, according to parish, over the whole period was as follows:—Barony or Glasgow Parish, 4; Cadder, 18; and Rutherglen, 4.

Barony or Glasgow Parish.—No cases of the disease occurred in this parish until the year 1920, when 4 cases were notified.

Cadder Parish.—In the year 1918 nine cases occurred in an outlying part of the parish, near Cadder Mansion, all members of the one family. The investigations illustrate the importance of the “missed case” as a source of infection, and the fact that the result of a Widal reaction should not outweigh the clinical features of an illness. On admission of the first of this series of cases to hospital, the Assistant Medical Officer visited the house, and found the mother in bed recovering from an illness which was said to have been influenza. About a fortnight prior to the onset she had been visited by her son, who had come direct from a military hospital where he had been treated for pleurisy. The medical attendant was suspicious of the mother’s illness, and sent a specimen of blood for examination. He did not notify the case, however, because of a negative report, but his suspicions were confirmed on the occurrence of secondary cases.

1921-1924.—The population of the Lower Ward District during this period averaged 31,063; the average annual number of cases amounted to 2; and no deaths occurred.

The following special scavenging districts were formed during this period:—Millerston and Riddrie, 1922; Lambhill, 1923; and Gartcosh, 1924.

The incidence of the disease, according to parish, over the whole period was as follows:—Barony or Glasgow Parish, 3; Cadder, 3; and Rutherglen, 1.